

POSTHUMAN
TRANSFORMATIONS
Bodies and Texts in Cyberspace



АЛЕКСАНДРА ГЛАВАНАКОВА

МЕТАМОРФОЗИТЕ
НА ПОСТЧОВЕШКОТО
Тяло и текст
в кибрепространството

Университетско издателство „Св. Климент Охридски“
София • 2014

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St. Kliment Ohridski University Press
Sofia • 2014

Grateful acknowledgment is hereby made to Mark Bernstein and Eastgate Systems, Inc. for their permission to reproduce images from Shelley Jackson. *Patchwork Girl. By Mary/Shelley and Herself*. Watertown, Mass.: Eastgate Systems, CD-ROM edition, 1995.

Grateful acknowledgement is hereby made to Talan Memmott for permission to reproduce images from his cybertext *Lexia to Perplexia*, 2000. ELO Directory.

<[http://www.uiowa.edu/~iareview/tirweb/hypermedia/talan_memmott / index.html](http://www.uiowa.edu/~iareview/tirweb/hypermedia/talan_memmott/index.html)>

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ISBN 978-954-07-3869-7

This book is dedicated to my children
who show me what it means to be human.

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INTRODUCTION

In our information society digital technologies have come to dominate everyday cultural practices. Among the many terms in currency I prefer Scott Lash's descriptive "technological culture" (2002), used in reference to the digital revolution and its cultural repercussions, which he defines in the following manner:

The global information order is a 'technological' culture. Here previously existing dualisms of technology, on the one hand, and culture, on the other, lapse into the same immanent plane. What previously was a representational culture of narrative, discourse and the image, which the reader, viewer and audience encountered in a dualistic relation, now becomes *a technological culture*.

(4, emphasis added)

Today's technological culture is defined by information and communication, databases and digital encodings. While information has become the dominant signifier, the principal metanarrative today is that of techno-biopower. The central figure in the discourse about science, both fictional and non-fictional, emerges as a fusion of the natural and the artificial. It is marked by anthropological mutations that have led to the birth of the info-humanoid or 'techno-centaur'.

Significantly, even biological organisms nowadays are defined as technological systems. Biological organisms are "forms of life" in Scott Lash's terms, which are undergoing a crucial change. In his book *Critique of Information* Lash argues that "as forms of life become informational, they shake off their 'organic' qualities and take on the form of networks" (2). He describes these new technologically determined forms of life as discontinuous, non-linear, always leaving open the possibility of another link. They encompass "the chip, the gene, the database, the fetus" (Lash 191).

Technical innovations reflect major changes in our world view, and serve as a driving force in the shaping of new world views. The

correlation between human user and digital technology has become more intense, which has deeply affected the transformations of the human body reflected in the diversity of images and functions of the body produced in conjunction with the digital environment. Hence, there arise two interrelated questions: *How are human bodies imagined in cyberspace in print and computer-mediated fictional texts? What does this reveal about the relationship between body and self-awareness in the new digital ecology?*

The research of such a topic has been motivated by the burgeoning interest in the metamorphosis of the textual and human body in the digital environment. My critical involvement with this area of research is related to the appearance and proliferation of different forms of computer-mediated literature – hypertext, cybertext and text-based games – in the past two decades. It has deepened with the explosive development of the field of digital textuality (Bolter, 1991; Bolter & Grusin 1999; Landow, 1992; Lanham, 1993; McGann, 2001; Murray, 1997; Ryan, 1999; Snyder 1997, 1998), and the concurrent preoccupation with the meaning and role of embodiment in technological culture (Balsamo, 1996; Bell, 2000; Grosz, 1994; Hansen, 2000, 2003; Hayles, 1999, 2001, 2005; Wegenstein, 2006). Among the realities of the technological culture are the transformations of the written text simultaneously with the alterations of the human body. In my opinion, it is essential not only to describe and be apprehensive about the ontological stability of human and textual bodies in the technological culture, but to chart possible future trajectories.

For me the proliferation of literature in the digital environment is an accelerating and exciting phenomenon that is in the process of legitimizing itself. To this testifies its anthologizing both online and in print.¹ An interesting fact that indicates the recognition

¹ See for example N. Katherine Hayles, et.al., *The Electronic Literature Collection, Volume 1* (ELO, 2006). The collection has been simultaneously published on CD-ROM. 29 May 2007 <<http://collection.eliterature.org>> See also Paula Geyh, Fred G. Leebron, & Andrew Levy, eds. *Postmodern American Fiction: A Norton Anthology* (New York: Norton, 1997), which includes excerpts from one of the first examples of cyberliterature – Michael Joyce, *Afternoon, a story*. CD-Rom (Watertown, PA: Eastgate, 1990). *The Electronic Literature Collection, Volume 2* was added in February 2011 <<http://collection.eliterature.org/2/>>

of the validity and significance of computer-mediated literature is the project developed in collaboration between the Library of Congress and the Electronic Literature Organization (ELO),² involving the selection, archiving, and preservation of several hundred web addresses featuring works of electronic literature. This project is remarkable in several ways. It is at once historical and developmental.³ By lending them authority, it gives the computer-mediated fictional texts status and recognition. By ensuring their relative fixedness, it preserves them for posterity.

Since digital technologies reshape the processes of producing (writing), consuming (reading) and disseminating texts, they cause a major disruption of the textual body, established through a 500-year-old print tradition. Secondly, they change the relation between computer-mediated texts, which can have no print materialization, and their readers. Consequently, the particular manifestations of this disruption of the textual body in technological culture lead to an important cultural consequence: the radical change in the way the user (reader) of such computer-mediated texts is situated with regard to the new media through the analysis of specific images and functions of embodiment.

The Textual Body

The quantity of computer-mediated texts and their accessibility has increased significantly in the past two decades and this has generated a heated theoretical debate on the role and future of the printed word as the dominant means of communication, education, enculturation, and the changed nature of literacy (Bolter, 1991; Landow, 1992; Lanham, 1993; Snyder, 1997, 1998; Selfe, 1999; Tuman 1992a, 1992b).⁴ The problem, as Jacques Derrida states

² Library of Congress. *National Digital Information Infrastructure and Preservation Program*. 2005. 11 May 2008 <<http://www.digitalpreservation.gov>>

³ The preservation of each address is to be done through periodic updates performed at <<http://www.loc.gov.webcrawls>>

⁴ Many have seen in this debate a restaging of Plato's dialogue *Phaedrus*, where the written word is presented as an unreliable means of communication.

in his analysis of the crisis of representation, is that “one cannot tamper” with the form of the book “without disturbing everything else” (1981 3). “The end of linear writing,” insists Derrida, “is indeed the end of the book” (1976 86). His expectations are that “it is within the form of a book that the new writings – literary or theoretical – allow themselves to be, for better or worse, encased” (1976 86). However, this is no longer true. The “new writings” have found a different medium, and with that have threatened the position of the printed book.

In this strongly contested field computer-mediated textuality has often been discussed, on the one hand, in a celebratory, even hyperbolic manner. In a much quoted article in *The New York Times Book Review* Robert Coover, the American writer of avant-garde postmodern fiction, pronounced the end of books.⁵ He was the first to introduce computer-mediated hypertext fiction to the general reading public as the form that would bring “true freedom from the tyranny of the line”.⁶ In that and in a subsequent article he wrote of the “endless expansion” of the narrative flow in the infinity of hyperspace.⁷

Another staunch advocate of textuality in the new medium is the specialist in classical and Renaissance rhetoric, and in prose stylistics, Richard Lanham, who writes about the “digital galvanization”

In the dialogue, Socrates relates the story of the Egyptian deity Theuth, the inventor of writing, who has the following to say about his invention: “Here is an accomplishment which will improve both the wisdom and the memory of the Egyptians. I have discovered a sure recipe for memory and wisdom.” But the king holds the contrary view: “[Y]ou, who are the father of writing, have out of fondness for your offspring attributed to it quite the opposite of its real function. Those who acquire it will cease to exercise their memory and become forgetful; they will rely on [. . .] external signs instead of their own internal resources.” Plato, *Phaedrus and Letters VII and VIII*, ed. Walter Hamilton (New York: Penguin, 1973) 96. For an in-depth discussion of these issues see Alberto Manguel, *A History of Reading* (New York: Penguin, 1996) especially the chapter “The Book of Memory”.

⁵ Robert Coover, “The End of Books”, *The New York Times Book Review* (June 21, 1992) 1, 8-10. There he states that this new technology “both absorbs and totally displaces” the printed book.

⁶ Ibid.

⁷ Robert Coover, “Hyperfiction: Novels for the Computer”, *The New York Times Book Review* (August 29, 1993) 1, 8-10.

that will ensure the promulgation of the Great books in electronic format.⁸ For him hypertext posits no threat to the printed book, but simply offers new channels for its distribution in an altered form. He illustrates how the Newtonian influence on society and thinking gave rise to the “C-B-S”- the “Clarity-Brevity-Sincerity” method of writing (195-6). Language was seen as the transparent and neutral conduit of facts, and this approach was easily mapped onto the aesthetics of print, giving rise to “the “crystal goblet” theory of typography.⁹ Just as in the rhetorical tradition, Lanham notes, so in postmodern writing too, language is not transparent and neutral, but intrinsically colored with ornament and rendered highly visible. According to him, the rhetorical ways of thinking are returning and they are beginning to supply an aesthetic for electronic expression (196). He finds that the computer has become the new expressive device for the arts and letters, not simply a computational engine, but a rhetorical and graphical one as well (200).

Jay David Bolter (1991) and George Landow (1992) join Richard Lanham in their reappraisal of literacy in the digital age, with their serious approval of the new digital technology not only as a tool for building an enormous repository of texts, but as a fresh new technique of writing. Thus J. Bolter, who also comes from an academic background of classical languages and literatures, states that: “The printed book, therefore, seems destined to move to the margin of our literate culture... This shift from print to the computer does not mean the end of literacy. What will be lost is not literacy itself, but the literacy of print, for electronic technology offers us a new kind of book and new ways to write and read” (1991 2). He firmly believes that electronic technology will offer “a fourth great technique of writing that will take its place beside the papyrus

⁸ “I think, then, that Western culture, for which the ‘Great Books’ has come to be a convenient shorthand phrase, is not threatened by the world of electronic text, but immensely strengthened and invigorated. I think we shall come to understand our great literary texts, and especially their neglected oral and rhetorical aspects, in ways that we never could have understood. The Great Books side of our politicized curricular street need not feel imperiled. The Dead White Males, digitally galvanized, will rise again.” Richard Lanham, *The Electronic Word: Democracy, Technology and the Arts* (Chicago: U of Chicago P, 1993) 2.

⁹ Ibid., 195-6.

roll, the medieval codex, and the printed book” (6). Bolter supports this argument with the statements that: “electronic technology fits perfectly with the semiotic view of language and thought in the tradition from C.S. Pierce to Umberto Eco...” and that “it is not simply the mind as computer, as the artificial intelligence specialists propose, but rather the mind as a network of signs, of which the computer is an embodiment” (207-208).

In strong opposition to the cyber-enthusiasts and hypertext proponents stand other critics, who grieve for the printed book. A typical example of this is the nostalgia that suffuses Sven Birkerts’ collection *The Gutenberg Elegies* (1994). The author fervently defends the printed book and laments the loss of joy in traditional reading. He extols the permanence of the printed word: “our entire collective, subjective history – the soul of our societal body – is encoded in print. Is encoded, and has for countless generations been passed along by way of the word, mainly through books” (Birkerts 20). At the same time he realizes that there is a movement away from “the patterns and habits of the printed page and toward a new world distinguished by its reliance on electronic communication” (118). Birkerts, as one of the elegists of the printed book, amplifies Socrates’ fear that writing emphasizes reliance on things external to the mind, claiming that our increasingly multi-, hyper-, and cyber-culture embraces the “ersatz security of a vast lateral connectedness” (228).¹⁰

What is common for most unsympathetic critics of the emerging forms of digital textuality can be recapitulated by referring to Jean-Francois Lyotard’s view as expressed in *The Inhuman* (1991). Lyotard’s protest is that in a culture ruled over by “bits,” as the elementary “units of information,” “there’s no longer any question of free forms given here and now to sensibility and the imagination. On the contrary, they are units of information conceived by computer engineering and definable on all linguistic levels – lexical, syntactic, rhetorical and the rest. They are assembled into systems

¹⁰ His views are subjected to a quite temperate and reasonable criticism by Matthew Kirschenbaum, “The Cult of Print,” *Postmodern Culture* 6.1 (September, 1995). 31 August 1998 <<http://jefferson.village.virginia.edu/pmc/text-only/issue.995/review-7.995>>

following a set of possibilities (a ‘menu’) under the control of a programmer” (34-35). He feels that the accumulation of information on a global scale and the frenzied evolution of technology endanger the basic features of humanity. Lyotard’s reflections are also based on the premise that writing itself is a form of technology, for “[a]ll technology beginning with writing considered as *techne*, is an artifact allowing its users to stock more information, to improve their competence and optimize their performance” (62). In this manner the ever expanding economical, technical and cultural system is so deeply committed to “performativity” that it has become *inhuman* (emphasis added). While he describes our entrapment in the expanding world of information as inevitable, Lyotard finds the global acceleration of quantitative increase to be a qualitative disaster and suggests methods of resistance in various aesthetic practices.

Despite the arguments to see electronic textuality as a validation of the darkest forebodings of the death of literature, the author and the book in general, it can also be considered as a literary phoenix of sorts. Bolter, among others, has been enthusiastic about the opportunities for creativity, the freedom that this new “writing space” offers.

The elements of the text are no longer fragments of a prior whole, but instead form a space of shifting possibilities. In this shifting electronic space, writers will need a new concept of structure. In place of a closed and unitary structure, they must learn to conceive of their text as a structure of possible structures. The writer must practice a kind of second-order writing, creating coherent lines for the reader to discover without closing off the possibilities prematurely or arbitrarily.

(1991 144)

Bolter has appropriately designated the current age as “the late age of print” – a description that has gained wide currency since the beginning of the 1990s (1991 2). This phrase refers to the hybrid forms now appearing with the new medium in a transitional age.

One can hypothesize that computer-mediated literature will not displace the book, but will exist side by side with it, similarly to the coexistence of phones, radio, television and other media. Still, it seems reasonable to speculate that some genres are best suited to the book form, especially long expository texts, such as the novel, and they will not migrate to the new medium.¹¹ Another reasonable expectation is that the new medium will develop imaginative forms of expression that are most suited to it. Cyberliterature may prove to be an enduring form or may turn out to be just one of the transitional forms between print culture and technological culture. Currently there is the marked tendency of blurring the boundaries between forms and genres in digital hybrids, one example of which is the convergence between computer-mediated form of literature and art installations.¹²

The debate over the future of the book outlined thus far is not about taking sides, but rather about exploring the cultural effects of the new phenomenon of computer-mediated literature. In this context I find highly appropriate the three main areas of exploration, as outlined by John Tolva, which appear in reaction to:

[The] fears and anxieties generated by the interaction of the print-based world and its emerging digital counterpart. As I see it, three specific sources of tension require investigation: First, the Platonic heritage of mistrust in the written word –

¹¹ This is reflected, for example, in the collection of essays: Joseph Tabbi & Michael Wutz, eds., *Reading Matters: Narrative in the New Media Ecology* (Ithaca: Cornell UP, 1997). This book is written as a strong defense of the narrative potential of the novel, whose history is traced from its literary coming-of-age in the 19th century to the current period. The authors feel that hypertext, on the other hand, has been slow in developing new art forms and that the novel has a multiplicity that is to be respected in the new media ecology. See also my text: “Колективното творчество в интернет или как ‘милион пингвини’ написаха отворен роман” *Лумепамурама*, 1.2 (2007) 7-17. (“Collaborative writing on the internet or how ‘a million penguins’ wrote an open novel”)

¹² One such example are the common explorations of the piece of cyberliterature *Still Standing* by Bruno Nadeau and Jason Lewis included in Volume 2 of the Electronic Literature Collection <http://collection.eliterature.org/2/works/nadeau_stillstanding.html> and the *Bit.Fall* installation by Julius Popp at the MOMA in New York <<http://www.youtube.com/watch?v=ygQHj1W0PPM>>

specifically, the fear that unmediated language loses its communicative function, becoming merely a receptacle of information; Second, the elusive ontic status of digital text, the search for the digital word-as-thing – specifically the anxiety generated by its disconcerting lack of physical presence; Third and finally, the blurry distinction between the verbal and non-verbal elements of electronic textuality – specifically, hypertext’s technical emulation of simultaneity and spatiality, characteristics usually associated with the visual arts.¹³

These anxieties are reflected in the specific areas of study that have provoked my interest in the field of computer-mediated texts, which lie at the center of the subsequent analysis.

The Human Body

The escalation of technological development has given rise to techno-phobic and techno-romantic sentiments that are recurrent in human history and accompany the introduction and mass application of any new technology. Both views – the utopian and dystopian – envisage the future transformation of the human into a new entity and the merging of the human body with the machine. Technology and the body have a long and complex relation. From a historical perspective technology has both foregrounded the limitations of the body, and has served as an extension to enhance the body’s potential. This has subsequently led to an almost obsessive probing into the issue of embodiment and its functions.

There are several major sociological reasons for this preoccupation with the body. These have been pointed out by Bryan Turner, who makes an overview of the recent developments in the theories of the body from a sociological perspective.¹⁴

¹³ John Tolva, “The heresy of hypertext. Fear and anxiety in the late age of print”, 1995. 11 February 1996 <<http://www.mindspring.com/~jntolva/heresy.html>>

¹⁴ Bryan Turner, “Recent Developments in the Theory of the Body,” in *The Body*:

Firstly, as a consequence of post-Fordism and post-industrialism the commercial and consumerist interest in the body comes to the fore. This is accompanied by an emphasis on keeping fit, having a beautiful body, postponing aging, and on the importance of pleasure and hedonism born out of leisure (Turner 19). Secondly, feminist criticism has generated a number of theoretical questions related to biology and sexuality on the one hand, and gender, equality and political issues, on the other (20). Thirdly, the demographic transition to a predominantly older population has brought about a whole set of related problems: economic (retirement) and health (medical) (21). To these I would add a fourth major cause: the socio-cultural effect of technology. Turner also states that the recent (re)discovery of the body is provoked by the “politics of anxiety” (24). As he explains, given the threat to the environment, the AIDS epidemic, high-technology medicine with its costs and applications, it is clearly understandable that many apocalyptic theories of body invasion have appeared.¹⁵ Working collectively these factors have resulted in the rise of the “somatic society,” because it is “a society within which our major problems are expressed through the conduit of the human body” (Turner 6).

The human body has been predominantly presented as aggressively colonized and replaced by technology in fictional and non-fictional discourses, be it in science fiction novels, in the technocrats’ manifestos or in net art. In the representation of the prosthetization and remodeling of the body, it is outright declared to be disappearing, obsolete, redundant, and efforts are made to discard it. Most significantly, the body in these readings is not seen as the locus of human identity.

I posit the contrary view. The very preoccupation with the flesh – whether with its destruction or preservation – in the discursive imaginings of the body in cyberspace analyzed here, proves the impossibility of denying the reality or materiality of embodiment. My aim is to provide an extensive account of the transformations of

Social Process and Cultural Theory, eds. Mike Featherstone, Mike Hepworth & Bryan Turner (London & Thousand Oaks: Sage, 1991) 1-35.

¹⁵ See for example Arthur Kroker, & Marie Louise Kroker, *Body Invaders. Panic Sex in America* (Montreal, New World Perspectives, 1987).

the bodies of fictional characters and the actual reader in interaction with/within cyberspace, and with this analysis to examine the validity of the claim that the body remains central in technological culture to the understanding of what it means to be human. The radical changes of the bodily potential require the acknowledgment that the corpus is inevitably transformed by incorporating new technological elements as an integral part of the body, but without renouncing the body's essential humanness. The recurrent body images that are generated both visually and textually in the works studied here, I interpret as manifestations of the posthuman, cyborgized individual. These images of the disintegration and dispersal of the human body will serve to illustrate the hybridization of the subject under the recent technological pressures.

I argue that humans have actual relations with digital machines and I explore how *the representations of these relations have been textually and visually configured in specific images*. However, the images of the body I interpret not only as alterations in appearance and structure, but as performing certain significant functions as well. *This functionality of the body in the realm of cyberspace I examine primarily in relation to the problematic issue of subjectivity in technological culture.*

The graphic, pictorial images of the body which appear as the visual component of the texts under discussion, as well as the ideational, conceptual images that are constructed by the verbal component are the focus of this current study. Hence, the visual and verbal images of the body complement each other in the analysis. Critics have noted that the growing proliferation of images online mark a return to the pictorial age.¹⁶ Still, some insist that the relationship between word and image is “interpenetrating” and “dialogic”.¹⁷ This is a direct consequence of the merging of the new medium and all older media. For Mary Hocks and Michelle Kendrick, among other cultural analysts, the new medium and the forms it fosters, do not represent a radical rupture with previous forms. They insist on the historical continuities, defining the digital

¹⁶ See for example Mary Hocks, & Michelle Kendrick, eds., “Introduction. Eloquent Images”. *Eloquent Images*. (Cambridge, Mass: MIT Press 2003) 1-18.

¹⁷ *Ibid.*, 1.

media “as yet another hybrid of word and images” (4). A useful reminder here is Bolter’s argument that words themselves are to be regarded as images, for they were such initially. However, their pictorial quality was lost with time, as words became “transparent” because of wide application.¹⁸ I accept the view that there is no polarity between word and image, but rather a constant interplay between the two. The transformations analyzed by me refer to the imagined physical and structural morphing of the body, but they also encompass a shift in the functions of the body, not understood narrowly as biological, but as instrumental in constructing the subject.

From the postmodern perspective the subject fragments and dissolves, becoming an intersecting point for language games. Still, no matter how fluid, fluctuating and discursively constructed the subject is assumed to be, s/he is still contingent on being-in-the-world. As Maurice Merleau-Ponty argues, it is only through the lived body that one has access to the world. The subject is situated in space, determined and contained by it through the body. In the words of Merleau-Ponty: “Far from my body’s being for me no more than a fragment of space, there would be no space at all for me if I had no body” (2002 117). It is by sensing one’s surroundings through the experience of the body that one has the means to apprehend the world. Hence, one needs a body both to create a world and to orientate oneself in it, according to this view (2002). Furthermore, one’s phenomenological presence in the world is realized through concrete embodied manifestations marked by the categories of gender, ethnicity, class, age, etc.

In the following pages I examine a selection of works by American writers, both print and computer-mediated texts, i.e. fictional works produced in collaboration with technology and serving as cultural marks in the evolution of textuality in the new digital environment. I have looked for representative works by American writers that expressly focus on issues of (dis)embodiment in cyberspace and the anthropomorphization of the machine – issues

¹⁸ Jay David Bolter, “Critical Theory and the Challenge of New Media,” eds. Hocks & Kendrick 19-37.

which have emerged with such force at the millennium. Thus, the texts that I have included share a common thematic preoccupation with body transformations instigated by the pressure of technology. They also illustrate the potential for textual experimentation offered by the application of the digital medium, which leads to serious metamorphosis of the textual body. Therefore, I have focused on the alterations in textuality, which are a logical consequence of the shift from the old to the new media, by charting out the successive stages of interrelation and modification between print and cyberliterature.

My choice to analyze the texts of writers – print and cyber – coming from the U.S. is motivated by several facts. Firstly, the origin of the computer in theory and practice, as well as of the Internet and subsequently of the World Wide Web, can be traced to centers of military and academic research in the U.S.A., as is illustrated further in this book. Secondly, from the beginning of the 1990s the first experiments in cyberliterature started to appear in America. Later, as these texts proliferated, the Library of Congress took up the initiative of gathering and preserving in its archives samples of cyberliterature and in this manner validating their significance. Thirdly, with the growth in number of hyper- and cybertexts American theoreticians, analysts and critics coming from different areas of the humanities started to explore the emerging field as is clearly illustrated by the literature review in the following chapter.

All this is not to say that the writing and examination of pieces of cyberliterature have been an exclusively American pursuit. In Europe, for example, significant contributions in the area of cyberliterature have been made by academics and universities from the “Scandinavian” school. References to them are included in this text as well. Indeed, today the writing of eliterature online, in cyberspace – the most global of places – is a global phenomenon in itself, so nationality and geographical location are hardly such a factor any more.

By way of opening the analysis I have chosen Pat Cadigan’s *Synners* (1991) – a print novel and a representative work of the American cyberpunk movement in science fiction. The merging of the body and digital technology came into clear view towards the end of the 1980s, a period marked by the rise of the cyborg

and the posthuman as products simultaneously of fiction and science. Cyberpunk fiction has envisaged many of the scientific innovations that have become implemented in everyday lives. It also presents a multilayered examination of the various potential scenarios in which the human and machine merge, interpenetrate or annihilate one another. In a similar fashion, Pat Cadigan's novel, as an early cyberpunk text, fulfills a twofold role. It foresees some technological innovations, but more significantly provides a cultural commentary on the human-machine interaction. However, her work has received much less critical attention than that of the 'founding fathers' of cyberpunk in the U.S. – William Gibson, Bruce Sterling and others – which group she joins as the only woman writer.

The two subsequent chapters deal with texts that are computer-mediated and can have no print materialization. They focus on the specific textual transformations alongside the major theme of disembodiment. I refer to them with the common term *cyberliterature*. In my understanding this term refers to literary texts written, distributed and read on the computer. My reason for preferring this term to others is that it alludes to the origin of this broad category of texts, namely, literary texts and computer games. Katherine Hayles describes cyberliterature as "the hybrid progeny of an interspecies mating between computer games and literary traditions."¹⁹ 'Interactive fiction,' 'electronic literature' (often abbreviated to 'eliterature') or 'novels for the computer' have also been used to describe this emerging form, whose basic nature is unclear as yet. Fiction writing in cyberspace hybridizes forms created by different media in a fashion closely reminiscent of Marshall McLuhan's idea of the interpenetration of media, i.e. that every new medium uses another medium as its "content" (1994 8). In this act of fusion, as McLuhan suggests, a qualitative change in textuality occurs, which leads to surpassing previous forms and thus a new form of communication is created. The computer in the technological age is the most powerful media hybrid so far, where all previous forms of media are converging. The cyberliterature of

¹⁹ See Katherine Hayles, "Cyber|literature and Multicourses: Rescuing Electronic Literature from Infanticide," *Electronic Book Review*, 30 Jan 2001. 14 March 2001 <<http://www.electronicreview.com/ebr11/riposte/rip11/hay.htm>>

my choice reflects structurally and thematically this hybridity, as well as the major theme of the present discussion: how people think about, socially produce, technologically mediate and experience their bodies.

The first generation of cyberliterature is *hypertext*. It bears the marks of the serious structural transformations of the textual body in the digital environment. Hypertext is a hybrid, involved with the tradition of the printed text, while simultaneously disrupting and deconstructing it. In most general terms, hypertext can be defined as “any organization of segments of text electronically linked in a network in such a way the reader has freedom of movement within that network” (Gaggi 102-103). I discuss the origin, development and features of hypertext in the subsequent chapter. Fiction has also been written in hypertext, and I examine one of the classic examples today of the type – Shelley Jackson’s *Patchwork Girl* (1995), which I analyze in Chapter 3. A literary hypertext, too, encompasses a number of pages connected through a variety of links, a web of textual spaces that the reader can navigate in diverse ways.

In Chapter 4 I concentrate on cybertext as second-generation cyberliterature. As hybrid forms of textuality proliferate in “the late age of print,” they become more involved with multimedia and develop into elaborate digital forms. The demarcation line for the two generations of cyberliterature: hypertext and cybertext, as Katherine Hayles notes, falls somewhere between 1995 and 1997.²⁰

The first generation of cyberliterature is exclusively text-based with navigation systems mostly confined to moving from one block of text to another (Hayles 2002). A software program that is used for the writing of such texts is, for example, *Storyspace*, with which Shelley Jackson has written *Patchwork Girl*. The second generation of cyberliterature is authored by a variety of programs, for example *Flash*, *Shockwave* and *XML*. These works are “fully multimedia, employ a rich variety of interfaces, and have sophisticated navigation systems” (Hayles 2002).

²⁰ See K. Hayles, “Deeper into the machine: Learning to Speak Digital,” *Computers and Composition*, 19. 4 (December 2002): 371-386. My quotes are from the online version 5 February 2003 <<http://www.sciencedirect.com>>

Cybertext bears all the characteristic features of the new medium. It can be described as multimedia, for it mixes sound and kinetic images with text. In addition it can, but does not always incorporate ludic, i.e. game-like features that are typical for the digital environment. The text here functions “as a material machine, a device capable of manipulating itself, as well as the reader” (Aarseth, 1991 24). Cybertext, then, can be distinguished from previous forms of textuality as depending extensively on computation, on the media that contains, maintains and produces the text in conjunction with the designer-author, and in response to the reader’s actions. As a consequence cybertext is distinctly interactive. Here I include Talan Memmott’s *Lexia to Perplexia* (2000) as one of the most innovative and representative cybertexts so far created that has been awarded for its originality.

Last but not least, in order to establish the connection between print literature and cyberliterature I refer to experimental print texts by American writers that have challenged the orthodoxy of fiction writing, and which can be seen as precursors, both thematically and formally, of cyberliterature. Amongst these are the Beats, the writers of the surfiction movement, and other, mostly postmodern, authors.

The book is structured chronologically, illustrating the borderline between print texts and cyberliterature that utilizes in varying degrees the potential offered by the new digital medium. The analysis is a multilevel one. As regards the textual body, it includes a discussion of formal issues, especially the media-specific features of the work, such as typographic layout and the problematic status of narrative in the digital environment. As regards the human body, the analysis is carried out on the level of themes, character development and reader-interaction, especially with the examples of cyberliterature. In the case of cyberliterature the texts under discussion have prompted me to analyze the particular forms of embodiment of the characters, but also the experiences of the embodied reader who comes to interact with the texts.

Owing to the interdisciplinary nature of the analysis, which studies the transformations of the human body in cyberspace as appearing in both print and cyberliterature, and of the textual body

in the new digital environment, no single school of thought can be found that deals with all these issues at the same time. Consequently, a cross-disciplinary approach is required to deal with a subject-matter of such complex literary, cultural and philosophical nature.

The main reason for my choice of this cross-disciplinary approach is that I am examining on-line phenomena – digital texts, including visual elements – that are not static and fixed, but are dynamic, in-the-making. Hence, the texts are not products, but processes; not objects, but becomings. Because of the indeterminate nature of the non-linear texts that I examine, it is impossible for the critic to be “a posteriori investigator,” as Espen Aarseth emphasizes (1994 82). He maintains that: “Like the user, the critic must be there when it happens. Not only that but, like the participant observer of social anthropology, he or she must make it happen – improvise, mingle with the natives, play roles, provoke response” (82). This explains why I lack the cold detachment of the observer of a frozen artifact over the distance of time and space, and also my bewildered involvement as I get ‘lost’ in cyberliterature, which I ‘write’ by reading it. Looking for the appropriate critical approach involves also surmounting the difficulty of writing in linear mode about non-linear texts.

In my analysis of the texts included here there is a general movement from a philological to an anthropological approach. I begin with an examination of the correlation between postmodern literary and cultural theoretical concerns and cyberliterature, in order to analyze the complex ways in which these technologies act upon the textual body. Cyberliterature is dynamic, volatile, erratic. The text in many cases becomes in true postmodern fashion supplementary, marginal, a mere caption to a picture, a fleeting image itself. In the words of Michael Joyce “print stays itself, electronic text replaces itself” (1995 87). The theoretical background for this approach I find in the consistent analysis of the classical rhetoricians Richard Lanham (1993) and Jay Bolter (1991), the literary critics George Landow (1992) and Brian McHale (1987, 1992), the writers of cyberliterature Stuart Moulthrop (1995, 1999) and Michael Joyce (1995, 1997), and others working in the field.²¹

²¹ See for example Johndan Johnson-Eilola, who emphasizes the parallels between postmodern theory and hypertext technology, since hypertext “encourages

Secondly, I discuss the new form of textuality engendered by the digital medium, by focusing particularly on Espen Aarseth's groundbreaking theory of cybertext (1997). My topic requires that I incorporate media-specific analysis, based on the work of the media guru of the 20th century, Marshall McLuhan, and the reconsideration of his major claims by a number of influential digital media analysts, such as Lev Manovich (2001), Jay Bolter and Peter Grusin (1999).

Thirdly, I include relevant philosophical discussions concerning the reconfiguration of the body by technology. The question of what constitutes a body and how technology may affect its (re)/construction is indeed one of long philosophical standing. A comprehensive overview of all theories is out of the scope of this book hence, I need to emphasize the limits within which I position my exploration. Among the many and still multiplying strands in the science of 'body criticism' I have selected only those, most of them quite recent in their genesis, where the analysis traverses the issues of embodiment and digital technology. As a whole my exploration has been informed by posthumanism – a relatively recent and by no means homogeneous theoretical movement that appeared in the early 1990s in the US. I consider it to be a useful and powerful tool in the study of embodiment in technological culture.

Therefore, I focus predominantly on the philosophical views of posthumanism, its radical version, as represented respectively by Marvin Minsky (1988), Hans Moravec (1990), the Extropian Group, and some multimedia artists (Stelarc), on the one hand; and its moderate version to be found in the writings of Donna Haraway (1991), Katherine Hayles (1999, 2001, 2005), Don Ihde (2002) among others. I find the categories of the cyborg and the posthuman analyzed in detail by the above-mentioned critics to be singularly appropriate to my discussion of the images and functions of the body in cyberspace, which reflect the current anxiety about the future of the human in technological culture. Applied to the

both writers and readers ... to confront and work consciously and concretely with deconstruction, intertextuality, the decentering of the author, and the reader's complicity with the construction of the text" (382) J. Johnson-Eilola, "Control and the Cyborg: writing and being written in hypertext," *Journal of Advanced Composition*, 13.2 (1993): 381-399.

mapping out of the unexplored fusion between digital technology, culture and literature, posthumanism can be seen as critical thinking at the cutting edge.

What the reader experiences as physical sensation and the significance of perception, when interfacing with a computer screen, are foregrounded by the cyberliterature I discuss. This requires that I include major points of Maurice Merleau-Ponty's philosophy of phenomenology. By using Merleau-Ponty's main claims as a starting point, I have looked for a relevant discussion of them, as filtered through the posthuman perspective. This approach I have discovered in the philosophy of technology as elaborated on by Don Ihde (2002), Mark Hansen (2003) and Bernadette Wegenstein (2006). Ihde claims that the most significant contribution of phenomenology in its rewriting by posthumanism is that phenomenology places the subject "in the world – but as embodied and in a perspective" (74).

CHAPTER ONE

PARSING THEORY, PARSING THE BODY

Traditionally technology, especially science, has been conceptualized as the binary opposite of nature. It seems quite obvious today that not only is nature becoming technologically enhanced, but that *technology is nature*, as Allucquere Rosanne Stone writes in her essay on the emerging digital culture.¹ Technology and nature have reached the stage where they literally constitute each other. A compelling illustration of this process is the merging of bodies and machines, which has intensified with the upsurge in the development of digital hardware and software.

Within the larger issue of the place of the body in cultural space that has been the focus of many theoretical discussions in recent years, arises the question of embodiment in cyberspace. As David Bell points out in his synopsis of the various approaches to bodies in cyberspace, “there has been an explosion of bodies across the humanities and social sciences” (2001 138). What happens to the bodies of fictional characters and users, when they interact with the computer screen?

¹ Allucquere Rosanne Stone, “Will the Real Body Please Stand Up? Boundary stories about virtual cultures,” *The Cybercultures Reader*, eds. David Bell and Barbara M. Kennedy. (London and New York: Routledge, 2000) 504-528. In support of the validity of this thesis I would add the fact released recently in the news that researchers from Cornell University have created the first genetically modified human embryo, which as some critics note has cleared the road towards the production of “designer babies.” For more details see Andrew Pollack, “Engineering by Scientists on Embryo Stirs Criticism,” *The New York Times* May 13, 2008, 10 July 2008 <http://www.nytimes.com/2008/05/13/science/13embryo.html?_r=1&ref=health;&oref=slogin> A similar move was taken by the British Parliament with the Labor government’s Human Fertilisation and Embryology Bill that allows the creation of hybrid ‘admixed’ embryos by inserting the nuclei of human cells into animal eggs. The Bill passed the Commons with an overwhelming majority on October 22, 2008. See the news announcement: “MPs Support Embryology Proposals,” *BBC News*, 23 October 2008, 28 October 2008 <http://news.bbc.co.uk/2/hi/uk_news/politics/7682722.stm> These two cases of ‘interspecies mergings’ exemplify the possibility of the actual production of chimeras.

1. Theoretical Concerns

1.1. Images of the body

I have chosen the word *image*, rejecting other likely candidates, such as the clichéd ‘representation’ and the loaded with feminist connotations ‘figuration,’² because of its manifold meanings that refer to the diverse visualizations of the body and the way it is experienced in technological culture. The etymology of the word reveals that *image* entered the English language through French from Latin: *imagin-*, *imagineis*, *imago*, which is akin to *imitari*,³ as has been noted by Roland Barthes – “According to an ancient etymology, the word image should be linked to the root *imitari*. Thus we find ourselves at the heart of the most important problem facing the semiology of images: can analogical representation (the ‘copy’) produce true systems of signs and not merely agglutinations of symbols?” (qtd. In Nicholas Mirzoeff, 135)

Therefore, the primary meaning of *image* is that it denotes an imitation, a visual representation, a reproduction of a person or thing. In that meaning it designates a semblance of a person, a copy. Thus, *image* refers to a likeness of an object produced on a photographic display and from this stems the derivative meaning of a picture produced on an electronic display, as a television or computer screen, which is precisely what I discuss. Simultaneously the word *image* indicates a representation of anything to the mind – a conception, an idea. It can also denote a figure of speech or even be a “virtual image” – a term used in optics. Alongside these many

² The term *figuration* has been used in feminist theories of the body. Building on Donna Haraway’s notion of the cyborg, Rosi Braidotti states that: “[f]eminist figurations use to define the project of becoming-subject women, a view of feminist subjectivity as multiplicity and process, as well as the kind of texts feminists produce.” See Rosi Braidotti, “Mothers, Monsters and Machines,” *Nomadic Subjects: Embodiment and Sexual Difference in Contemporary Feminist Theory* (New York: Columbia University Press, 1994) 180-1.

³ See the entry of the Merriam-Webster Dictionary online. 20 February 2008 <<http://www.merriam-webster.com/dictionary/image>>

connotations of the word, there are additional varied interpretations of the collocation 'images of the body.'

First of all, it foregrounds the act of imagining: producing illusions, fantasies, chimeras, that are distinct from reality. As Lyotard has pointed out, the crisis of representation is an essential feature that marks the rise of modernity: "Modernity, wherever it appears does not occur without a shattering of belief, without a discovery of *the lack of reality* in reality" (1993 9, emphasis in the original). This intervention of other realities takes place within the realm of cyberspace, in particular, and technological culture in general, with the powerful incursion of the virtual. It is precisely this aspect of *virtuality*, understood as the artificial, synthetic and false, which defines the place referred to as cyberspace.

Secondly, any analysis of the images of the body in cyberspace should reflect the preponderance of the visual in technological culture, which has come to dominate over the textual. Critics find that: "human experience is now more visual and visualized than ever before" (Mirzoeff 4). Indeed, in Martin Heidegger's words, "a world picture [...] does not mean a picture of the world but the world conceived and grasped as a picture [...] The world picture does not change from an earlier medieval one into a modern one, but rather *the fact that the world becomes picture at all is what distinguishes the essence of the modern age*" (1977 130, emphasis added). In this line of thought Nicholas Mirzoeff emphasizes that in ancient and medieval times "the world was understood as a book," while the age of postmodernism "marks the visual disruption of any attempt to define the world-as-text, so that it has become "the world-as-a-picture" (6).

Thirdly, in consumerist culture, especially in the products of popular culture and advertising, the principal signifier is the image, and it is often the image of a perfect body that is used to market, publicize or promote products and people. These various connotations of the word *image* merge as tributaries in the two strands of meaning – "imagining" and "imitating" – and it is at this junction that the images of the body proliferate in simulacra of copies in cyberspace. At the same time, it is in order to *imitate* the images of fashion models and celebrities, as well as to realize

the images of bodily perfection that one *imagines*, that one works hard in *reality* to remodel one's body through fitness, clothes, make-up, plastic surgery, and soon maybe through cloning, genetic engineering and nanotechnology. Thus Mike Featherstone in his analysis of the place of the body in consumer culture⁴ written from a sociological perspective maintains that

Consumer culture catches onto the prevalent self-preservationist conception of the body, which encourages the individual to adopt instrumental strategies to combat deterioration and decay [...] and combines with it the notion that the body is a vehicle of pleasure and self-expression. Images of the body beautiful, openly sexual and associated with hedonism, leisure and display, emphasizes the importance of appearance and the 'look.'

(1991 170)

Further on, the connotation 'images of the body' is obviously related to, but is to be distinguished from, the term 'body image' used in psychoanalysis. Body image is the mental representation one has of oneself, which gradually develops in each individual. Peter Slade defines the body image as "a loose mental representation of body shape, size and form which is influenced by a variety of historical, cultural and social, individual, and biological factors, which operate over varying time spans" (302). The image one has of one's body emerges from the lived experience of pleasure, pain, desire and physical needs, and the imaginary sense of how it appears to others. While it involves the feelings one has concerning the constituent body parts in relation to environment, the body image also encompasses fantasies, especially unconscious ones. As is commonly known, Freud has carefully examined this issue and has discussed at length the constitution and development of the erogenous zones, their representations and importance in the

⁴ Many critics have written on the function of the body in consumerist society. See for example: Jean Baudillard, "The finest consumer object: the body," *The Body. A Reader*, eds. Miriam Fraser and Monica Greco. (New York: Routledge, 2005) 277-282.

formation of the body image. It may not reflect reality truthfully, as is usually the case, but it is crucial to one's self-confidence, to the interaction with the physical world and with other people. The image of one's body evolves through time, and the self continuously revises it. Simplifying a very complex matter, it can be said that the body image exists in two main modes: a normative and a traumatic. One measures oneself against the normative body image, and at times physical damage, pain, illness or even the shock of a remark concerning one's body can lead to a rupture of the norm and the emergence of the traumatic body image.

The construction of the body image is related to what Jacques Lacan has termed the "Imaginary order" – the mirror stage in the subject's psycho-sexual development.⁵ This "primordial discord" occurs at the age of 6-18 months (4). Seeing the image of oneself in a mirror establishes a discord between the ideal image of one's body that is bounded, whole, complete, and the reality of the one's body at that age, which is already fragmented, chaotic, lacking. This fissure determines the logic of the fantasy construction that would dominate the psychic life of the subject from then on. Lacan explains:

The mirror stage is a drama whose internal thrust is precipitated from insufficiency to anticipation – and which manufactures for the subject, caught up in the lure of spatial identification, the succession of phantasies that extend from a fragmented body-image to a form of its totality I shall call orthopaedic – and, lastly, to the assumption of the armour of an alienating identity, which will mark with its rigid structure the subject's entire mental development.

(1977 4)

The mirror image of a stable and coherent self is just a fantasy that has to compensate for the real sense of lack. As Lacan has revealed, constructed in infancy, the "Imaginary order" continues to exert influence throughout an adult's life.

⁵ Jacques Lacan, *Écrits: A Selection*, trans. Alan Sheridan. (New York: Norton, 1977).

The multiple aspects of the ‘body image’ – attractiveness, self-esteem, sexuality – make it a rather complex construct to be discussed in greater detail here. However, I believe that it complements the various connotations of ‘images of the body’ that are under consideration. In my view the interactive computer screen in technological culture has a dual and dubious function: on the one hand, functioning as a mirror that presents the ideal image, or at least has the potential to do so; on the other, suggesting images of bodily disintegration and dispersal that amplify the sense of the subject’s deconstruction, the devaluation of the human under the pressure of the machine. As cyberspace is currently part of the everyday environment, it plays a crucial role in the construction of the body image in both its physical, perceptive and conceptual meanings through the visual and verbal production of diverse images of the body. The diverse strands in the interpretation of the images of the body as outlined here, I weave in the analysis of utopian and dystopian discursive constructions of the body in cyberspace in the pages that follow.

1.2. Cyberspace

Cyberspace is simultaneously an indefinable, overdefined and undefined space. While emphasizing the fact that cyberspace is a unique phenomenon, an outcome of a new technology, critics inevitably resort to familiar cultural icons and myths in theoretical discussions about it. In this manner cyberspace has often been compared to Jorge Luis Borges’ library or to “the Aleph,” Borges’ brilliant evocation of a mythical place:

At first I thought it was spinning; then I realized that the movement was an illusion produced by the dizzying spectacles inside it. The Aleph was probably two or three centimeters in diameter, but *universal space was contained inside it*, with no diminution in size. Each thing (the glass surface of a mirror, let us say) was infinite things, because I could clearly see it from every point in the cosmos.

(Borges 129-130, emphasis added)

Borges' fantastic space – “the Aleph” – resonates with Michael Benedikt's vision of cyberspace as “a territory swarming with data and lies, with mind stuff and memories of nature, with a million voices and two million eyes ... billowing, glittering, humming, coursing, a Borgesian library, a city; intimate, firm, liquid, recognizable and unrecognizable at once” (1991 2). The challenge to all attempting to describe cyberspace can also be rendered in the words of the awe-stricken narrator of Borges' story: “How can one transmit to others the infinite Aleph, which my timorous memory can scarcely contain?” (129).

It should be emphasized from the start that cyberspace is as much a physical space characterized by data, bits and codes, as it is a mythical, even spiritual and fantastic space. This dubious nature of cyberspace can be best illustrated by referring to its very origin: in science and in language, respectively.

The realities of the Cold War required that the communication network established in the 1960s in the US between the government, researchers and contractors (including military) be decentralized, without a single point of control in case of an enemy attack. So the world's first long-distance computer network, the APRANET, was funded by the US Department of Defense in 1969 through its Defense Advanced Research Projects Agency (DAPRA). In the mid-1980s the National Science Foundation decided to sponsor the building of a network between the computer science departments in the US. Thus the CSNET came into being. So until the end of the 1980s access to the network was limited to the military and specified academic fields. It was only in the 1990s with the inevitable influx of business interests that an explosion in communication networking took place, which has led to the globalization of what was originally an American, and military, phenomenon.

These few facts concerning the appearance of cyberspace are a convincing reminder that it possesses definite material aspects: hardware and software, as well as specific locations and destinations; that it is in effect a physical space.⁶ The materiality

⁶ For more information on the origin and meaning of the concept cyberspace see: Michael Benedikt ed., *Cyberspace: First Steps* (Cambridge, Mass: MIT

of cyberspace is what users and analysts often forget about. People tend to focus on cyberspace as an abstraction, laying the emphasis on its virtual nature. This approach was launched by the discourse about cyberspace. In 1984 William Gibson introduced the newly coined word ‘cyberspace’ in his cyberpunk novel *Neuromancer*, which gives a dystopic vision of the near future.

Cyberspace. A consensual hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts... A graphic representation of data abstracted from the banks of every computer in the human system. Unthinkable complexity. Lines of light ranged in the nonspace of the mind, clusters and constellations of data. Like city lights, receding ...

(1984 51)

The “consensual hallucination” that has arisen in the “nonspace of the mind” has become part of almost any definition of cyberspace, thus bringing forth the unreal, extrasensory, spiritual attributes of the concept, while ignoring its essential materiality. For the majority of users cyberspace seems to reside within the nonspace of the mind and appears basically as its construct. Later Gibson explained how he coined the term: “Assembled word cyberspace from small and readily available components of language. Neologic spasm: the primal act of pop poetics. Preceded any concept whatsoever. Slick and hollow – awaiting received meanings. All I did: folded words as taught. Now other words accrete in the interstices” (1991 28). As Gibson maintains, the word ‘cyberspace’ was without reference when he coined it, which could explain the readiness with which this assemblage of available linguistic components has received and contained within itself diverse meanings and interpretations. It was the Gibsonian perspective which initiated the purely symbolic and fictional interpretations of cyberspace. David Whittle, for

Press, 1991); David Whittle, *Cyberspace: The Human Dimension* (New York: W.H.Freeman & Co, 1996); “Chapter One: CyberSpace and Virtual Reality” in Victor J. Vitanza, *Cyber.reader* 2nd ed. (Needham Heights: Allyn & Bacon, 1998).

example, finds that cyberspace is a “fictional, psychic space, where minds fuse” (9). In a similar vein of thought, emphasizing our need to reinvent old myths, Benedikt has explained the proliferation of mythological interpretations of cyberspace. For him:

Cyberspace’s inherent immateriality and malleability of content provides the most tempting stage for the acting out of mythic realities, realities once “confined” to drug-enhanced ritual, to theater, painting, books [...] Cyberspace can be seen as [...] an inevitable extension, of our age-old capacity and need to dwell in fiction, to dwell empowered or enlightened on other, mythic planes, if only periodically, as well as on the earthly one.

(1991 6)

In attempting to describe cyberspace as a place both material and abstract, I find myself in a similar predicament of reducing this intangible space to already familiar concepts. It is my suggestion that the notion of cyberspace be analyzed with reference to a philosophical theory and not that all-American. By applying Henri Lefebvre’s tripartite scheme (1991), as elaborated on by Edward Soja (1996), I would rather interpret cyberspace as simultaneously a physical instantiation, a projection of the imagination, and a lived-in space. Lefebvre defines his trialectics of spatiality in the following manner:

The field we are concerned with are, first the *physical* – nature, the Cosmos; secondly, the *mental*, including logical and formal abstraction; and thirdly, the *social*. In other words, we are concerned with the logico-epistemological space, the space of social practice, the space occupied by sensory phenomena, including products of the imagination such as projects and projections, symbols and utopias.

(Lefebvre 11-12, emphasis in the original)

Thus I posit that cyberspace is primarily *a perceived space*, a material physical spatiality that is directly open to the senses.

As a *conceived space*, it is where utopian visions of the creative imagination can come alive. When interpreted as a conceived space our knowledge about cyberspace becomes entirely ideational, and can be explained through “discursively devised representations of space” (Soja 79). Cyberspace is also a *social space* and as such involves a complex, coded symbolism of images that define the space of ‘inhabitants’ and ‘users.’ Finally, it is the *lived-in space* of diverse communities: chat rooms, forums, blogs, massive multiplayer computer games, involving role-playing, discussion groups, etc.

Edward Soja reworks Lefebvre’s trialectics of spatiality, by expanding the philosophical concept of “Thirdspace.” Building on Soja’s notion of Thirdspace, in my opinion, cyberspace can also be characterized as:

[T]he space where all places are, capable of being seen from every angle, each standing clear; but also a secret and conjectured object, filled with illusions and allusions, a space that is common to all of us yet never able to be completely seen and understood, an “unimaginable universe”, or as Lefebvre would put, “the most general of products.”

(57)

Cyberspace seems to be this Thirdspace of social interaction, at once real and imagined, material and observed through the senses, invented and mentally constructed. It is my contribution in the theoretical discussion of cyberspace to interpret it as an approximation to Soja’s Thirdspace, and to define it by referring to Lefebvre’s theory of space, including all three spatialities of *perceived, conceived and lived space*. After providing this general definition of cyberspace, I shall further discuss this chameleonic concept in Chapter Two, dedicated to the analysis of a print work of the cyberpunk movement, where it first appeared as a conceived, fictional place.

2. The Textual Body

2.1. Terminology: Hypertext, Node, Lexia, Link.

Hypertext can be defined in the most general way as the binding together of a number of documents by links.⁷ The concept, though not the word, as marked by the historians of the World Wide Web,⁸ was introduced in the 1940s by Vannevar Bush, a scientist and Director of the Office of Scientific Research and Development at the time of President Franklin Delano Roosevelt. Bush envisioned a machine he called the Memex to help support human memory, by making the storage and retrieval of information more efficient. For him the Memex had to serve as a kind of memory prosthesis, by imitating the way the human mind gathered, stored and selected information for a specific purpose:

⁷ The usage of hypertext here is to be distinguished from the meaning with which it is used by the literary theorist Gérard Genette, who included hypertext as one of the five forms of *transtextuality* (defined as “all that sets the text in a relationship, whether obvious or concealed with other texts”) the other being paratext, intertext, metatext and architext. In his definition hypertext is a text that alludes to, derives from, adapts and/or rewrites an antecedent literary text, termed the hypotext. For Genette hypertextuality is “every relationship joining a B text (which I would call *hypertext*) to a previous A text (which I would call obviously *hypotext*) into which it incorporates itself in a way different from that of a commentary” (5). Gérard Genette, *Palimpsests. Literature in the Second Degree*, trans. Channa Newman & Claude Doubinsky. (Lincoln & London: U Nebraska P, 1997). Bearing in mind the characteristics of hypertext as outlined by Genette, the concept in this meaning can also be applied to Shelley Jackson’s *Patchwork Girl* and to Talan Memmott’s *Lexia to Perplexia*, as they are marked by extensive rewritings of preceding fictional and non-fictional texts. For the sake of clarity of the analysis, however, I will not be using hypertext in Genette’s meaning.

⁸ Some of the most important publications on the history and meaning of hypertext are: James M. Nyce & Paul Kahn, eds., *From Memex to Hypertext: Vannevar Bush and the Mind’s Machine* (Boston: Academic Press, 1991); Theodor Nelson, *Computer Lib/ Dream Machines* (Seattle: Microsoft Press, 1987); Jay David Bolter, *Writing Space: The Computer in the History of Literacy* (Hillsdale, NJ: Lawrence Erlbaum, 1991); Ilana Snyder, *Hypertext: The Electronic Labyrinth* (Melbourne: Melbourne University Press, 1996). Mark Bernstein and Diane Greco (eds.) *Reading Hypertext* (MA: Eastgate Systems, 2009). The list is by no means complete.

A memex is a device in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility. It is an enlarged intimate supplement of his memory.

(Bush 1945)⁹

The purpose of this device, as Bush saw it, was not to write literary works, but only to facilitate scientific progress, i.e. he envisaged that it would be applied as a useful tool.

When data of any sort are placed in a storage, they are filed alphabetically or numerically, and information is found (when it is) by tracing it down from subclass to subclass... The human mind does not work in that way. It operates by *association*. With one item in its grasp, it snaps instantly to the next that is suggested by the association of thoughts, in accordance with some intricate *web of trails* carried by the cells of the brain.

(Bush 1945, emphasis added)

From the above quotation I would highlight two words – “association” and “trail” – for they identify the novel way in which texts are created and received as hypertexts. They favor a cognitive model that is predominantly associational, not linear and hierarchical, which has been the pattern imposed by the print technology on the organization of thoughts and texts. At the same time, the reader, so as not to get lost in the hypertext, needs to traverse his/her own trail, that is blaze his/her own path through the text, so as to be able to extract some meaning from it.

[W]hen numerous items have been thus joined together to form a trail, they can be reviewed in turn, rapidly or slowly, by deflecting a lever like that used for turning the pages of

⁹ Where citations in this text do not contain any reference to the pages they are quoted from, this is because the source of the particular quote is an electronic document, and as such by default does not contain any page numbers.

a book. It is exactly as though the physical items had been gathered together from widely separated sources and bound together to form a new book. It is more than this, for any item can be joined by numerous trails.

(Bush 1945)

Bush thus introduced three new notions that would affect the creation and reception of hypertext: link, trails of links, and webs of trails.

According to Landow, Bush laid the foundation for the reconfiguration of the text from a fixed, static, preset material object to a fluid, dynamic, indeterminate virtual web. The actual word ‘hypertext’ was coined much later by Theodor Nelson in the 1960s. He gave the following definition in his book *Literary Machines*, which was first published in 1981 and has undergone several revised editions since then:

By ‘hypertext’ I mean non-sequential writing – text that branches and allows choices to the reader, best read at an interactive screen. As popularly conceived, this is a series of text chunks connected by links which offer the reader different pathways.

(0/2)

“ORDINARY” HYPERTEXT

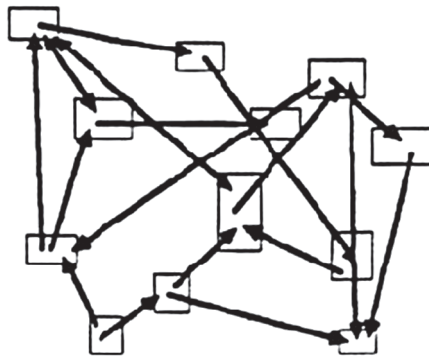


Figure 1. Theodor Holm Nelson: *Literary Machines*.

Nelson envisioned the computer itself as a literary machine, where he defined literature in the most general terms possible, as a vast assemblage of information.

Hypertext can include sequential text and is thus the most general form of writing. Unrestricted by sequence, in hypertext we may create new forms of writing which better reflect the structure of what we are writing about; and readers, choosing a pathway, may follow their interests or current line of thought in a way heretofore considered impossible.

(Nelson 0/3)

Nelson has worked on materializing his vision in the project Xanadu, directed at producing an “instantaneous electronic literature.”¹⁰ His dream of creating “the most sophisticated readership and usership civilization has yet seen” centers on the now familiar hypertext system (3). He hypothesizes:

But some system of this type will and can bring a new Golden Age to the human mind. Imagine a new libertarian literature with alternative explorations so anyone can choose the pathway or approach that best suits him or her... imagine a rebirth of literacy.¹¹

Some of the prominent analysts in the field of hypertextuality, such as Lanham and Bolter, share Nelson’s view on the advent of literacy, and they are convinced that the transference of the text from printed book to digital form is a historical necessity, as I already pointed out in the Introduction. It is too early to assert whether this vision of the proliferation of literacy will be realized due to the expansion of computer-mediated literature, but the existence of text machines operated by readers, so that they produce different output, is a fact.

¹⁰ The name of the project itself was inspired from Samuel Taylor Coleridge’s poem “Kubla Khan,” which provided Nelson with the vision of this magical place. For a description of the *Xanadu* model by its inventor see Nelson’s page. 18 may 2001 <<http://xanadu.com/xuTheModel/>>

¹¹ From the preface to the 1993 edition *Literary Machines*, which is unnumbered.

Out of this merging of literature and technology arises the ‘literature system,’ which is based on the free flow of associations. This fluidity is often ruptured by imposing on it sequential presentation.¹² The non-sequential writing that Nelson proposes affects in radical ways the act of reading, as the writer designs pathways from which the reader may choose. To complicate matters further, the writer may build an interconnected structure of possible sequences, without being able to foresee all possible paths, which the reader is then left to explore by traversing individual trails.



Figure 2. The frontispiece of Ted Nelson's *Computer Lib/Dream Machines* (1974). Original image by John R. Neill for L. Frank Baum's *Tik-tok of Oz* (1914).

¹² In this connection Nelson writes: "The structure of thinking is not, in itself, sequential. It is a system of intertwined ideas. ... No idea necessarily comes before or after another; organizing these ideas according to a sequential presentation is a complex and arbitrary process. And often it is also a destructive process, since in dividing up the system of connections so as to be able to present them according to a sequential order, it is difficult to avoid breaking – that is leaving out – some of the connections that are part of the whole" (*Literary Machines* 1/14).

Hypertext is an amazingly simple concept, according to Espen Aarseth, who clarifies that, depending on the context, it does, however, signify three different things. Firstly, it may denote “a direct connection from one position in a text to another” (1994 67). Secondly, it may refer to “an implementation of the concept, usually a computer application called hypertext system” (67). Finally, it signifies “a text embedded in (and defined) by such a system” (1994 68). In my theoretical overview I present the general concept of hypertext, while in Chapter 3 I discuss a specific implementation of this concept through the software program *Storyspace* in the hypertext of *Patchwork Girl*.

Any surfer through the World Wide Web is accustomed to hypertext as the interconnected space of nodes and links. The *node* is the individual unit of information, which is usually considered to occupy the space of a single screen. On the World Wide Web it is simply termed a ‘page.’ Often, instead of the more technical word ‘node,’ analysts prefer the term ‘lexia,’ borrowed from Roland Barthes’s *S/Z*, and adopted by George Landow, which he defines as “blocks of text” (1994 4).¹³ It is essential to point out that R. Barthes saw the lexia first and foremost as a unit of reading, which is not confined by any physical parameters, in much the same way as it appears in hypertext:

We shall therefore star the text, separating, in the manner of a minor earthquake, the blocks of signification of which reading grasps only the smooth surface [...] The tutor signifier will be cut up into a series of brief, contiguous fragments, which we shall call *lexias*, since they are units of reading.

(1974 13)

The *link* is the connection between two nodes or lexias, which can be made highly visible in a graphic manner (through color, font, letter size or brightness, for instance), or is to be inferred by the

¹³ For the use of Roland Barthes’ term in the early theory on hypertext see George Landow, *Hypertext: The Convergence of Critical Theory and Contemporary Technology* (Baltimore: Johns Hopkins University Press, 1992).

reader, as is sometimes the case with cyberliterature. In Landow's words: "Electronic links connect lexias 'external' to a work – say, commentary on it by another author or parallel or contrasting texts – as well as within it and thereby create text that is experienced as nonlinear, or more properly, as multilinear or multisequential" (1994 4). The link is one of the salient features of hypertexts, which can be interpreted in three ways. It is the main organizational device, contributing to the coherence of these otherwise structurally loose narratives; it is a rhetorical device of the text; it is a dynamic navigational device facilitating the process of "realization" and "concretization" of the text itself.

The concept of linking is certainly not a novelty. It exists in print books under various forms, for example, jumping to footnotes or cross-referencing when reading encyclopedias, academic and scientific texts. Linking is also an integral part of the act of reading any fictional text, whereby the reader continually establishes hidden connections on structural and stylistic levels within the text. However, the link is not rendered visible and is not a feature of the apparent organization of print fiction. In hypertext the link is rendered as a visible feature of its formatting.¹⁴

Links acquire greater significance, especially when the object of

¹⁴ Critics of hypertext that have suggested this are George Landow, Katherine Hayles and Espen Aarseth. They illustrate this fact by referring to experimental printed novels that have incorporated in recent years hypertextual elements. Most notable among these avant-garde books are several of Jorge Luis Borges' stories as, for example, "The Garden of Forking Paths"; Mark Saporta's *Composition No 1* (1961), consisting of a stack of cards that have to be reshuffled before each reading producing a different story; Italo Calvino's *The Castle of Crossed Destinies* (1973) using Tarot cards to lay out in columns and rows the stories of the characters; Julio Cortazar's *Hopscotch* (1963); Milorad Pavic's *Dictionary of the Khazars* (1989) "a lexicon novel in 100.000 words," which according to the alphabet of the language in which it is read, ends differently; his *Landscape Painted with Tea* (1991) – a novel comparable with a cross-word puzzle, that can be read both vertically and horizontally; and *Last Love in Constantinople* (1999) – a tarot-novel consisting of 22 chapters corresponding to the cards of the Major Arcana; and finally *The Glass Snail* (2003), which appears in two formats – in print and online. 23 February 2005 <<http://wordcircuits.com/gallery/glasssnail/East/euro/pomo.html>> All of these texts can be read alternatively, however none relies for this exclusively on the link, with the exception of the last one.

analysis is literary texts written, delivered and read on a computer screen. In cyberliterature the link is the primary irregularity, an “abnormality” even, with which the reader has to cope. Therefore, to the definition suggested previously, I should add that the link is the one idiosyncratic, singular feature of hypertext.

Undoubtedly, the main role of the link within any such text is the organizational one. This function of the link has been historically recognized first and pertains only to the surface structure of the text; as such its role is related to questions of form and not of reading. At the same time, I should stress that the link should not be mistaken for a simple virtual “page-turning” device. The link triggers associations, carries a wealth of connotations, so it is much more than a shortcut, a mere organizational device that holds the complex structure of the hypertext together. As links can also be content-based, they are of semantic nature, expressing the association between words and concepts. Indeed, links create significations in themselves; they are not just hollows in the text, accepting any kind of inscription.

This has given rise to repeated attempts to build a poetics of the link.¹⁵ Such attempts are rooted in the original conception that links are associational in nature – the idea launched first by V. Bush. “There is a new profession of trail blazers,” he writes, “those who find delight in the task of establishing useful trails through the enormous mass of the common record” (1945). This has led to interpreting links as rhetorical devices and to the creation of the “rhetorics” of the link.¹⁶ Susana Pajares Tosca takes this analysis of links as semantic devices further by indicating that they possess a certain lyrical quality.¹⁷ She draws a parallel between links and the

¹⁵ Jeff Parker, “A Poetics of the Link,” *Electronic Book Review* 12 (Fall 2001) is one such example. He makes the most general division between functional links and those that convey literary effect. The latter he categorizes into: Emotive, Lateral, Complicating, Temporal and Portal links. The text is available online. 22 May 2005 <<http://www.altx.com/ebr/ebr12/park/park.htm>>

¹⁶ See for example N.C. Burbules, “Rhetorics of the Web: Hyperreading and Critical Literacy,” *Page to Screen: Taking Literacy into the Electronic Era*, ed. I. Snyder (London: Routledge, 1998) 102-121. Burbules analyzed links in the context of rhetorical figures such as metonymy, metaphor, synecdoche, etc.

¹⁷ See Susana Pajares Tosca, “The Lyrical Quality of Links,” *Hypertext '99 Proceedings*, (Darmstadt, Germany, ACM P 1999) 217-218. Susana Pajares

figures and structures of poetry. For her hypertext and poetry share common features since none of them is hierarchical or exclusive in terms of structure. In her view, cyberliterature is:

[A] new form between poetic prose and poetry. It combines relatively long texts in complex organization with poetical structures and figures. We need a study of the relationship between links and the classical figures of speech, because links also imply different kinds of movements of meaning that could be classified like we do with metaphor, metonymy...

(1999 218)

Her opinion reiterates that of Michael Joyce, one of the first writers of cyberliterature, author of the first fictional hypertext, *Afternoon. A Story* (1987), and designer of the software writing program *Storyspace*. His understanding is that links are words, which promise thematic continuity. He poetically defines them as “words that yield.”¹⁸

Other critical investigations of the nature of the link stress the fact that it activates the performance of the text in any one given reading act. So it is essential to the appearance (meaning both ‘emergence’ and ‘manifestation’) of cyberliterature, and to the act of reading on a computer screen.¹⁹ Through the linking mechanism the reader is able to browse through the text.

Its major role is not only to function, in Derrida’s words, as an incision in the text: “an arbitrary insertion of the letter-opener by which the reading process is opened up indifferently here or

Tosca, “A Pragmatics of Links,” *Journal of Digital Information* 1.6 (2000). 30 Jan. 2003 <<http://jodi.ecs.soton.ac.uk/Articles/v02/i03/Pajares>> My quotes are from the online publication.

¹⁸ He uses this description in Michael Joyce, *Afternoon, A Story*. Hypertext fiction., CD-Rom (Cambridge, Mass: Eastgate Systems 1990). In reference to links he notes the following: “I haven’t indicated which words yield, but they are usually the ones with texture.”

¹⁹ See for example Scott Rettberg, “The Pleasure (and Pain) of Link Poetics,” *Electronic Book Review*, 12 (Fall 2001). 23 March 2002 <<http://www.electronicreview.com/riposte/rip12ret.htm>>

there” (1981 301). A necessary skill that users of hypertext have to develop is to read significantly the absences in the story rendered in hypertext, as well as the presences. Though links signify both a physical and a communicative gap, they do not lead to a break down in the communicative process, for where a blank appears in the narrative, the reader’s imagination is set in motion. What happens, I hypothesize, is what Wolfgang Iser has described in his theory of the hermeneutic gap. According to Iser, literary texts contain “fragments” between which exist “gaps.”

Reader-response theories insist that there are multiple gaps in all kinds of texts we read. “Holes or gaps are so central in narrative fiction because the materials the text provides for the reconstruction of the world (or a story) are insufficient for saturation. No matter how detailed the presentation is, further questions can always be asked; gaps always remain open” (Rimmon-Kenan 127). The reader fills in these gaps, thus creating a unique, complete version of the textual world, which Iser defines as “the virtual dimension of the text” (1980 55). A text’s virtual dimension resembles virtual reality in that both are temporary possible worlds created by the reader through interaction with discursive interfaces. Iser insists on the interaction between reader and text, whereby the reader through constant gap filling takes an active role in the creation of meaning.²⁰ Thus a continuous interpreting move set forth by the links as blanks/gaps in the narrative brings the reader to creating a coherent story.

Therefore, there are two types of text-reader interaction in the reading of cyberliterature: one is on the physical level, which results in the construction of a sequence of lexias – a possible alternative of the narrative – through the reader’s individual choice of links, i.e. the trail s/he has made; and the second is on the level of hermeneutics, which leads to the communication between text and reader. These two levels of interaction are intertwined and inseparable in

²⁰ I first came across the analysis of links in the context of Wolfgang Iser’s theory of reading at the site of the Electronic Literature Organization. See the lexia [Filling in the Iserian Gap] 19 January 2000 <<http://eliterature.org>> This idea that has been developed by others as well, for example Terry Harpold. “The Contingencies of the Hypertext Link,” *Writing on the Edge* 2.2 (1991): 126 – 37.

hypertext. The physical interaction with the text is a prerequisite for the communicative process. Therefore, the link acts as a central narrative device determining the unfolding of the story and the creating of meaningful interpretations. Similarly, Tosca asserts that links “force us to make meaning before and after traveling them” (2000). She demonstrates that the act of choosing a certain link is initiated with a centrifugal expansion of meaning before the new lexia is revealed to the reader, and is completed by a centripetal concretion of interpretation, when the reader contrasts his/her initial implicatures with the actual text (2000). Tosca concludes that the process of retroactive editing of implicatures and their continuous revision is thus facilitated by the link, not hampered by it.

To summarize, links are the locus of the reading act where the communication between text and reader is triggered off and accomplished; they are the blanks that can be filled with contextually relevant and subjectively determined interpretation. The act of link-traversal is to be seen as one of the chief meaning-formation devices in cyberliterature.

2.2. Major Trends in Criticism.

Cyberliterature and postmodern literary theory

The obvious difficulties in theorizing cyberliterature in any framework, literary and/or cultural, arise from its shifting, unstable, erratic nature. It incorporates and extends art forms created previously in different media. Therefore, my contention is that there is no polarity between the printed book and cyberliterature. From a historical perspective literature has evolved through different media; it is by no means bound to the book format. In most general lines its development can be traced from oral forms to written: the papyrus scroll, the parchment, the codex, the printed book and at present, the digital machine. All these represent different technologies of writing (Bolter, 1991 33). For example, mechanization resulted in the printing press, “which was the first text ‘processor’, the first technology of writing to duplicate words en masse” (Bolter 33).

Hence the current period is marked by a transition from one technology of writing to another. In this context the growing experimentation with the traditional form of the book, especially since the 1960s, reveals the tendency to look for ways to overcome the limitations of print. It seems that the appearance of cyberliterature follows naturally from this widespread movement within print literature in its search for new writing ventures and possibilities for expression. So the appearance of cyberliterature by no means represents a decisive break with the print literary tradition. The two need not be opposed dramatically, as has been done often with the proclamation of the demise of the book and the resultant catastrophic cultural outcome. Neither should the book be cast out completely as is done by some radical supporters of digital textuality, such as Mark Taylor and Esa Saarinen who provoke us with: "If you read books, justify it!" (1993 11). In my view, digital textuality has to be interpreted as a continuation of the experimental probing within the literary domain. Espen Aarseth, whose theory of cybertextuality I outline further on in this chapter, also points out: "an important clue to the emergence of digital text forms: new media do not appear in opposition to the old but as emulators of features and functions that are already invented" (1997 74).

When cyberliterature appeared in the 1990s, those who set out to critically examine it analyzed it within the tradition of the printed book, mostly with reference to postmodernism as a movement of literary experimentation and academic exploration. Cyberliterature shares some of the features that have come to be regarded typically postmodern, and that have been charted out by its most influential theorists, such as Jacques Derrida, Roland Barthes and Jean Baudrillard. Cyberliterature is inherently metafictional and self-referential, consisting basically of a collage of textual and visual elements, where not only the concept of center is deconstructed, but the whole idea of the plot as well, so that there exist only entrance and exit points to the text. The main attributes of cyberliterature are non-linearity, networking, openness, fragmentation and intertextuality.

Bearing in mind the common features that it shares with postmodern fiction, it seems only natural that cyberliterature has

been discussed and analyzed within the matrix of postmodern literary theory. Moreover, hypertext as the early manifestation of cyberliterature has been interpreted as a validation of the basic theoretical tenets of reader-response, poststructuralism and deconstruction by a number of its critics. The following quotation from Bolter's *Writing Space* can serve as an illustration of this approach:

Postmodern theorists from reader response critics to deconstructionists have been talking about text in terms strikingly appropriate to hypertext in the computer. When Wolfgang Iser and Stanley Fish argue that the reader constitutes the text in the act of reading, they are describing hypertext. When the deconstructionists emphasize that a text is unlimited, that it expands to include its own interpretations – they are describing hypertext, which grows with the addition of new links and elements. When Roland Barthes draws his famous distinction between the work and the text, he is giving a perfect characterization of the difference between writing in a printed book and writing by computer.

(24)

George Landow, who is one of the leading authorities on Victorian literature and culture and a pioneer in the theory and criticism of hypertext,²¹ also focuses on the convergence of postmodern literary theory and hypertext. His views are laid out in two of his major

²¹ Landow is the founder and webmaster of several of the first significant webs serving educational purposes: George Landow, Julie Lauhardt, and Paul Kahn, *The Dickens Web*. (Cambridge, Mass: Eastgate Systems, 1992. 2nd ed. 2003). 20 October 2005 <<http://eastgate.com/catalog/Dickens.html>> ; George Landow, et al. *The Victorian Web*. *Internet database*. 21 February 1998 <<http://www.stg.brown.edu/projects/hypertext/landow/victorian/victov.html>>; George Landow, et al., eds, *Cyberspace / Hypertext / Critical Theory*. *Internet database*. 11 March 1999 <<http://www.stg.brown.edu/projects/hypertext/landow/cpace/cspaceov.html>>; George Landow, and Jon Lanestedt. *The "In Memoriam" Web*. *Hypertext database*. Storyspace version (Cambridge, Mass: Eastgate Systems, 1992). 18 November 2001 <<http://eastgate.com/catalog/InMemoriam.html>>

book-length studies – *Hypertext: The Convergence of Contemporary Critical Theory and Technology* (1992) and *Hyper/Text/Theory* (1994). The following quotation is just one illustration of his view:

Electronic linking, which provides one of the defining features of hypertext, also embodies Julia Kristeva's notions of intertextuality, Mikhail Bakhtin's emphasis on multivocality, Michel Foucault's conceptions of networks of power, and Gilles Deleuze and Felix Guattari's ideas of rhizomatic, "nomad thought." The very idea of hypertextuality seems to have taken form at approximately the same time that poststructuralism developed, but their points of convergence have a closer relation than that of mere contingency, for both grow out of dissatisfaction with the related phenomena of the printed book and hierarchical thought.

(Landow, 1994 1)

Landow finds that hypertext "creates an almost embarrassing literal embodiment" of the principles of intertextuality, of weaving the text with others, building a network that destroys the intellectual separation of texts and thus "any sense of textual uniqueness" (1992 53). This model of the text as network appears in poststructuralist writing. R. Barthes' description of the ideal text in *S/Z*, indeed, seems to be written to describe hypertext:

[T]he networks are many and interact, without any one of them being able to surpass the rest; this text is a galaxy of signifiers, not a structure of signifieds; it has no beginning; it is reversible; we gain access to it by several entrances, none of which can be authoritatively declared to be the main one; the codes it mobilizes extend as far as the eye can reach, they are indeterminable [. . .] ; the systems of meaning can take over this absolutely plural text, but their number is never closed, based as it is on the infinity of language.

(5)

Derrida's words, too, that texts have "a woven texture – a web that envelops a web" (1981 6) are prescient concerning hypertext. Art, including that of novel writing, as seen by postmodern theory, is open to an infinite play with other texts, discourses and cultural practices. Textual openness and discontinuity becomes even more flagrant in hypertext with its montage-like structure. From this Derridean emphasis upon discontinuity originates the conception of hypertext as a vast assemblage that foregrounds the writing process and complicates further the act of reading. As Linda Hutcheon stresses in her study of the theory and practice of postmodern fiction, to question the concepts of authority, unity, center, continuity, closure, among others, is "not to deny them – only to interrogate their relation to experience" (Hutcheon 57). Hypertext continues these interrogations in many ways. Landow claims that hypertext has serious implications for literary and cultural studies and can find important applications within educational settings (1994 9).

The ideas embodied in the practice of hypertext can be culturally translated into Jean Baudrillard's understanding that the postmodern is "characteristic of a universe where there are no more definitions possible... It has all been done. The extreme limit of these possibilities has been reached. It has destroyed itself. It has deconstructed its entire universe. So all that are left are pieces. What remains to be done is to play with the pieces. Playing with the pieces – that is postmodern" (1984 24). For Baudrillard, as for other postmodern philosophers, there are no stable social, political or historical structures, no causal relationships, no totalizing scientific truths. Theory, art, the universe itself are deconstructed. Everything is indeterminate, simulated, artificial and fluctuating. In Baudrillard's "semiurgic" society and Guy Debord's "society of the spectacle,"²² the real disappears into a proliferation of images and signs;²³ the simulation of the real becomes more authentic than reality itself:

²² Guy Debord, *Society of the Spectacle*, trans. Donald Nicholson-Smith (New York: Zone book, 1995).

²³ A telling example of this is the "most photographed barn in America" in Don DeLillo's novel *White Noise* (New York: Penguin, 1998). The barn has become a popular place for sightseeing in the US, because of the collective process of mass reproduction. Two cultural studies professors regard the barn with a kind of "awe", feeling that this is "a religious experience in a way" (12).

Reality founders in hyperrealism, the meticulous reduplication of the real, preferably through another, reproductive medium, such as photography. From medium to medium, the real is volatilized, becoming an allegory of death. But it is also, in a sense, reinforced through its own destruction. It becomes “reality for its own sake”, the fetishism of the lost object ... the hyperreal.

(Baudrillard, 1988 144-145)

This general postmodern cultural perspective, finding its extreme expression in a pessimistic thinker such as Baudrillard, achieves a most fitting articulation in hypertext, which can be seen as an example of *infotainment*. The disjointed configuration of hypertext foregrounds the skepticism and cynicism at the turn of the 21st century. Cyberliterature in general clearly reveals the crisis in representation, which in effect reflects prior ontological and epistemological questions. It is in this respect that the critic can rightfully assert that hypertext is postmodern in form, structure and thematic concerns. A justifiable claim in this respect would be that cyberliterature, particularly hypertext as one of its manifestations, is an upshot of “the literature of exhaustion,” to use John Barth’s words from his essay²⁴ of the same title.

The plurality, multisequentiality, nonlinearity, openness and decenteredness of hypertext form a continuation with narrative experimentation in print form.²⁵ Critics have looked for the print

²⁴ John Barth, *The Literature of Exhaustion and the Literature of Replenishment* (Northridge, Ca: Lord Jon Press, 1982). Barth’s essay “The Literature of Exhaustion” published for the first time in *Atlantic* 220 (August 1967): 29-34 is viewed by many as the manifesto of postmodernism in the US. There he wrote: “By ‘exhaustion’ I don’t mean anything so tired as the subject of physical, moral, or intellectual decadence, only the used-upness of certain forms or exhaustion of certain possibilities – by no means necessarily a cause for despair” (29). Later he insisted that he was merely making clear that a particular stage in history was passing, and pointing to possible directions in the follow-up essay “The Literature of Replenishment: Postmodernist Fiction,” *Atlantic* 245 (January 1980): 65-71.

²⁵ Theodor Nelson argues in *Literary Machines* that “hypertext is fundamentally traditional and in the mainstream of literature” (17). He cites as examples the *Talmud* and Nabokov’s *Pale Fire* (1962). For him even the front of a newspaper is as hypertextual as any digital text.

precursors of hypertext and have often found them in the writings of Jorge Luis Borges, for example in *The Garden of Forking Paths*. This narrative with its continuous branchings, built on the metaphor of an enormous labyrinth of forking paths, is seen as an illustrative text in laying down the hypertextual principles.²⁶ It is quite revealing that not only J. Barth based his highly provocative and influential essay on Borges' stories, but that hypertext writers rewrite Borges as well (as is the case with Stuart Moulthrop).

The American experimental writers of the 1960s and 1970s, who have been labeled as postmodern but who can also be appreciated as forerunners of hypertext, have a special relevance in the context of the present discussion. A common feature of these works of metafiction, written in that period in the US, is the play with and deconstruction of the conventional techniques of narrative structure and typographical layout. Robert Coover's *Pricksongs and Descants* (1969), John Barth's *Lost in the Funhouse* (1967), William Burrough's *Naked Lunch* (1959), and his science fiction trilogy *The Soft Machine* (1961), *The Ticket that Exploded* (1962) and *Nova Express* (1963), Thomas Pynchon's *Gravity's Rainbow* (1973), Kathy Acker's *Blood and Guts in High School* (1984), Steve Katz' *The Exaggerations of Peter Prince* (1968), William Gass's *Willie Master's Lonesome Wife* (1968), Donald Barthelme's *Guilty Pleasures* (1974) – to name but a few – are self-reflexive texts that employ different strategies to foreground the artificiality of their fictional worlds. These texts have become recognized as metatextual.

In the timeline leading to the appearance of hypertext another radical alternative to traditional print narrative appears – the 'surfiction' movement in the US. The term was coined in 1973 on analogy with 'surrealism,' giving up mimesis altogether and inserting a self-conscious, self-reflexive approach to fiction-writing instead.

²⁶ Borges' story "The Garden of Forking Paths" (1941) is itself the subject of a rewriting. The result is one of the first hypertexts: Stuart Moulthrop's *Forking Paths: An Interaction after Jorge Luis Borges* (1987), the writing of which Moulthrop discusses in "Reading from the Map: Metonymy and Metaphor in the Fiction of 'Forking Paths,'" eds. Landow and Delaney, *Hypermedia and Literary Studies*, (Cambridge, Mass: MIT Press) 119-132.

Raymond Federman included the manifesto of the movement “Surfiction – A Position” as an Introduction to his collection of essays *Surfiction: Fiction Now ... and Tomorrow* (1975), where he defines this new narrative practice in the following manner:

[F]or me, the only fiction that still means something today is that kind of fiction that tries to explore the possibilities of fiction; the kind of fiction that challenges the tradition that governs it; the kind of fiction that constantly renews our faith in man’s imagination and not in man’s distorted vision of reality – that reveals man’s irrationality rather than man’s rationality. This I call SURFICTION. *However, not because it imitates reality, but because it exposes the fictionality of reality.*

(7, emphasis added)

Federman goes as far as to call for a new positioning of the reader in the changed narrative ecology, and this appeal is fulfilled by cyberliterature.

All the rules of principles of printing and bookmaking must be forced to change as a result of the changes in the writing (or the telling) of a story, in order to give the reader a sense of free participation in the writing/reading process, in order to give the reader an element of choice (active choice) in the ordering of the discourse and the discovery of its meaning.

(9)

My purpose in referring briefly to the literary precursors is by no means to provide an exhaustive timeline of hypertext, but to emphasize the permeability between textual experimentation in print form and the genesis of hypertext.²⁷

²⁷ Richard Lanham for instance has examined the directions of hypertext as anticipated in Dadaist poetry in *The Electronic Word: Democracy, Technology, and the Arts* (Chicago: U of Chicago P, 1995) 17, 31-34, while Ilana Snyder, in her extensive analysis of the literary precursors of hypertext includes James Joyce’s *Ulysses* (1997 83). Laurence Sterne’s *The Life and Opinions of Tristram Shandy*,

I certainly agree that the approach incorporating the views of postmodern thinkers and critics of literature and culture can elucidate some of the basic features of cyberliterature, such as networking, lack of closure and intertextuality. However, there is one feature of cyberliterature that is markedly missing in the postmodern approach to cyberliterature – the technology itself. Though sharing many characteristics with the experimental forms of print narratives labeled as postmodern, cyberliterature bears certain distinctive features that are a function of the medium used to create them. The extreme visualization of the page, the synaesthetic experience of reading, the use of explicit organizational devices, such as maps and links to help structure the text, mark cyberliterature as a unique phenomenon in comparison to the printed book.

When Landow points out the “reduced or denatured physicality” of electronic textuality itself (1994 2), he goes on as far as to claim that “a central fact about the digital word lies in its intrinsic separation of text from the physical object by means of which it is read” (1994 1-2). I would like to contest this claim. It actually goes against the grain of all that postmodernism has tried to accomplish in foregrounding precisely the physicality of the text, thus emphasizing its constructedness and artificiality. In this field of experimentation postmodernism and cyberliterature have moved in one direction: towards overcoming the transparency of the written word, by highlighting it through color, form, even movement and sound in the digital environment, altogether by making it decidedly visible. As the physicality and the virtuality of the digital word are foregrounded, the user is made to realize that the function of the text is intrinsically intertwined with the very medium used to transmit it. The medium is as important to the act of communication, as is the message itself. Cyberliterature created as a hybrid form between the print and digital word in its evolution is marked by a greater involvement with multimedia.

Gentleman, appearing initially in the distant 1759 (the first two volumes, for the remaining nine volumes appeared over a period of ten years), is often cited as a literary experiment with the genre of the novel which also anticipates hypertext fiction.

Cyberliterature as ergodic text

Computer-mediated literature requires a specialized terminology and critical framework. In answer to this need Espen Aarseth developed the theory of cybertextuality, which describes the transformation in the texts and in the reading process. The “common trope among hypertext theorists to claim that hypertext ‘embodies’ or ‘makes manifest’ this or that literary theoretical concept” Aarseth considers to be “the reification fallacy” (1997 78). I have already provided examples of this ‘fallacy’ in criticism at the dawn of hypertext, and I will now add another one. Bolter notes that: “what was only figuratively true in print, becomes literally true in hypertext” (*Writing Space* 158). Aarseth emphasizes precisely this discrepancy between the phenomenological construction of the text in literary theory and the material realization of hypertext. Hence, he has two main goals. Firstly, to determine how the text as a general concept can be redefined from the point of view of computer-mediated texts; and secondly, to develop a new methodology to describe and analyze the mutations and transformations of texts that can have no print realization.

The cybertextual perspective, according to the originator of this theory, is not to be limited to computer-generated texts only. Cybertextuality includes in its field experimental print texts, cyberliterature, as well as role-playing games such as MUDs (Multi-User Dimensions),²⁸ and consequently is not restricted in its object of study to digitally mediated textuality only. Aarseth claims that cybertext is not to be regarded as a brand new form of text, but rather as a perspective on all modes of texts, be they printed or digital.²⁹

²⁸ The acronym stands for a Multi-User Dungeon or Dimension and refers to text-based multi-user environments in which users can create characters, objects, etc. They ‘remain’ on the Web and other users can interact with them, thus allowing a World to be built gradually and collectively. MUDs and their variants (MUSE – Multi-User Simulated Environment; MUSH – Multi-User Shared Hallucination or Habitat; MMORGs – massive multi-player online role-playing games) are constructive, dynamic, real-time games.

²⁹ Aarseth discusses print texts, too, from the perspective of cybertextuality, as, for example, a Chinese text of oracular wisdom *I Ching – The Book of Changes*

Aarseth's approach is essentially *textonomic*, i.e. he examines the role the textual medium plays in the realization of the literary work and the differences in the functions of the different media. He employs correspondence analysis, a branch of exploratory analysis, to categorize the variables of the textual machine and build his multidimensional model. His approach is just another example of the tendency to merge the study of literature with the exact sciences of mathematics and physics, a widening in the scope of interdisciplinary studies – a process illustrative of these technologically dominated times.

Cybertext theory regards the text “as a machine – not metaphorically, but as a mechanical device for the production and consumption of verbal signs” (Aarseth, 1997 21). If the text is regarded as a machine for the production of expression, hence it is perceived as having computational ability. According to this perspective the text/machine is realized through a triad: the verbal signs, a material medium and an operator (21).

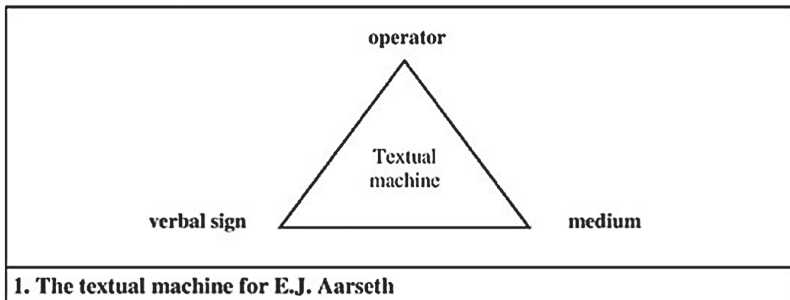


Figure 3. E. Aarseth. The Textual Machine. 1997, p. 21.

(around 1122-1770 BC), which he considers to be the oldest forerunner of non-sequential textuality. Through recombination of hexagrams it can produce 4 096 meaningful reading sequences (1997 2). Katherine Hayles examines how a print novel of the Victorian era, William Mallock's *A Human Document* is transformed in a hypertext by Tom Phillips in his *A Humument: A Treated Victorian Novel* to which she applies the theory of cybertext. See K. Hayles, “The Transformation of Narrative and the Materiality of Hypertext,” *Narrative* 9.1 (January 2001): 21-39.

The functional differences of these three constituent parts and the whole range of relations among seven basic variables used by Aarseth to describe cybertext – dynamics, determinability, transiency, perspective, access, linking, user functions – is what results in 576 textonomical genres, which describe how textual systems work.

One more clarification of terms is required. In his analysis, Aarseth distinguishes between the string of signs as they exist in the text, which he terms the *textons*, and the string of signs, as they appear to the reader, which form the *scriptons* (1997 62). The mechanism by which scriptons are generated from textons is what forms the *traversal function*. He defines the texton as the “basic element of textuality,” “conceived as an arbitrarily long string of graphemes” and “identified by its relation to the other units as constrained and separated by the conventions or mechanisms of their mother text” (1994 60). The texton belongs to the textual deep structure as a strategic potential, while the scripton is “an unbroken sequence of one or more textons as they are projected by the text” and belongs rather to the reading process (60). In other words, the textons in cyberliterature are the units which generate the textual surface and these include bits, assembly language and programming code. The inscriptions visible to the user are the scriptons.

On the basis of the pragmatics of the traversal functions Aarseth differentiates between texts. The first type is a non-linear text, which does not present its “scriptons in one fixed sequence” (1994 61). An agent, either the user, or the machine itself, causes the emergence of an arbitrary sequence of scriptons, creating a text that defies linearity. Actually the definitive feature of cyberliterature, be it hypertext or cybertext, is that it resides in non-linear text.

A nonlinear text is an object of verbal communication that is not simply one fixed in sequence of letters, words and sentences, but one in which the words or sequence of words may differ from reading to reading because of the shape, conventions, or mechanisms of the text.

(Aarseth, 1994 51)

One of the major contributions of cybertext theory is the analysis of the changed position of the reader. Aarseth dispenses with the reader altogether and in his model s/he reappears as the user or operator. The user may have four different functions depending on the degree of his/her involvement with the physical construction of the text.³⁰ All texts presuppose that the reader perform an *interpretative function*, as is posited in different literary theories dealing with reader-response and text reception. In addition, the user may perform an *explorative function*, whereby s/he has to make decisions as to what paths to take from those offered. Furthermore, the user may have a *configurative function*, in that s/he can change the scriptons, or the surface appearance of the text and finally, the most creative of all, is the *textonic function*, for here the reader adds new textons or traversal functions, in other words affects the deep structure of the text. An obvious conclusion would be that it is only when performing this last, textonic function, that the reader/user fulfills a function equal to that of the author of the original text. While the interpretative function is always realized in the process of reading any text, the other three functions may appear alternatively depending on the text itself.³¹

³⁰ This categorization of cybertext indicating the different degrees of involvement of the reader is derived from the distinction Michael Joyce makes between “exploratory” and “constructive” hypertext. An exploratory hypertext limits readers to navigation through a fixed body of materials, while a constructive hypertext provides for possible contributions from the reader, thus allowing the reader to change the very nature of the text. The dividing line of author and reader in constructive hypertext is blurred. See Michael Joyce, “Siren Shapes: Exploratory and Constructive Hypertext” *Academic Computing*. (November, 1988): 10-14, 37-42. Another categorization from the perspective of the reader that takes into account his/her interaction with the text is provided by Moulthrop’s distinction between interactive and proactive readers. He uses the game comparison when differentiating between these two types of readers: “Readers could very easily learn to approach hypertexts not interactively but proactively, not as players but as masters of the game” (Moulthrop, 1991 130).

³¹ Aarseth gives a table with various examples from print and digital texts that require the reader to perform different functions (1997 69). The ancient Chinese text *I Ching* offers a configurative function, while Julio Cortazar’s *Hopscotch* (1966) – an explorative one. Significantly, none of the print texts discussed by Aarseth offers the reader the chance to play with the deep structure of the text, i.e. to have a textonic function. This function appears only in digital texts of the game

Aarseth's approach to the position of the reader from the perspective of the theory of cybertext recalls to mind M. Foucault's view of the author as a function of the discourse that has its social, historical and legal implications.³² The author cannot be dispensed with in cybertext, for s/he becomes a sort of engineer of the text. The author, it may be added, is least of all 'dead', but has mutated and multiplied in cyberspace. The new writing medium may offer new ways for non-authoritative and collaborative writing, yet even in the most democratic environments on the World Wide Web, such as the MUDs and open-source programs, some vestiges of control are preserved in the attempt of structuring these environments. As Coover notes: "The author did not disappear, as was feared or hoped for, but became a kind of designer or architect or landscaper, as well as writer, building or laying out a structural or geographical space through which the reader might roam, as though on a quest of her own" (2000). The author is aided by the other operator of the text machine, the performer of the text – the reader/user.

Different theories of reading have envisioned the reader position in relation to the text in a variety of ways: for Roman Ingarden it is an encounter, for Hans-Robert Jauss – a convergence, for Wolfgang Iser – an interaction. Cybertextuality perceives the reader/user's position as an *intervention*, which in itself can be categorized by degree. Cybertext is not only kinetic, always in motion, as a result of the readers' interference, but it may also be metamorphosed as a result of the readers' intervention. Aarseth sees the traditional reader of print literary works as "a voyeur", while for him the cybertext reader is a "player", a "gambler" (4). Cybertext requires that the reader do much more than interpret, it requires intervention, or an act of physical construction of the text; in other words it offers a variety of ways in which the reader can complete the text. Examples of such texts are the MUDs, where the reader moves beyond interpretation to physical construction in the creation of story worlds. In these the user can perform a textonic function. In addition, in the example of collaborative digital fictions such as *The*

type, mostly MUDS and adventure games.

³² M. Foucault, "What is an Author?" *The Foucault Reader*, ed. Paul Rabinow (New York: Penguin Books. 1991) 141-160.

Hypertext Hotel – a hyperfiction that resulted from the workshops taught by Robert Coover at Brown University, the reader is also ‘elevated’ to the status of author. I consider it best to let Coover’s own words describe this experiment:

[W]e in the workshop have played freely and often quite anarchically in a group fiction space called “Hotel”. Here, writers are free to check in, to open up new rooms, new corridors, new intrigues, to unlink texts or create new links, to intrude upon or subvert the texts of others, to alter plot trajectories, manipulate time and space, to engage in dialogue through invented characters, then kill off one another’s characters or even sabotage the hotel’s plumbing... This space of essentially anonymous text fragments remains on line and each new set of workshop students is invited to check in and continue the story of the Hypertext Hotel.

(1992 23)

To describe the special category of reader-influenced texts Aarseth employs the term *ergodic*. Ergodic texts in Aarseth’s terms “require a non-trivial effort” for the reader to traverse or navigate the text (1997 1). The term *ergodic* Aarseth borrows from physics and its meaning is to be derived from the two constituent Greek words “*ergon*,” which means work, and “*hodos*,” meaning path. While the definition in itself seems rather vague, especially in the impossibility to define what exactly “a non-trivial effort” stands for in the act of reading, still, in my view, it represents a sound attempt at taking into consideration one of the most important characteristics of the reading process on the computer – the information feedback loop. In other words, I believe that a literary analysis of cyberliterature should be complemented by the cybertext perspective, so as to bring to light two crucial aspects of these texts: first, the medium, which Aarseth considers as “an integral part of the literary exchange” (5), and second, the possibility of the reader to affect the text by traversing it by way of his/her individual trail.

The reader’s choice of pathways in the text results in different ‘contours of reading’. Stuart Moulthrop has suggested that “the

contours of an individual hypertext [are] the momentary structures of coherence and possibility apparent to the reader as she interacts with the structure” (1999). Consequently, in each act of reading every reader constructs a different contour, which will be a direct outcome of the potential of the text to be re-configured or constructed. Through ergodics the user is made to produce a narrative version of a text and this is where the changed role of the reader lies. As Landow points out, the difficulty facing any reader of cybertext, including the critic, is that one can never master the total text, as these documents are non-reproducible, no matter whether they are “custom or randomly generated” (1994 34). In other words, the critic can only sample the text, while participating actively in its production – an act that is unparalleled in reading any form of fixed text of print literature.

In my view, it is the potential for intervention in the deep structure of the text, which is realized to its full in some forms of cyberliterature, that demarcates the line between print and digital texts. Print literature even in its most boldly experimental forms does not offer the reader the chance to play with its textons, in other words to affect the deep structure of the text. This function, in which the reader is allowed to become co-author of the text, is so far present only in the computer medium and even there, only in a limited number of texts.

When focusing on what cybertext has to add to the theory and understanding of the text, I am of the same opinion as Aarseth that “a text ... is like a limited language in which all the parts are known, but the full potential of their combinations is not” (1994 57). The script is contingent on the technological conditions. However, despite its groundbreaking implications, I think that the theory of cybertext can be applied with success only to some print texts that are non-linear in the meaning ascribed by Aarseth and provided previously in this chapter. My argument is that cybertext theory in its famous triad of operator, verbal sign and medium, highlights the crucial role of the medium in any instancing of the text. In print narrative, however, the medium is transparent, invisible and has been rendered so by virtue of the fossilized habits of creating and receiving texts that have evolved with the print technology. With cyberliterature the case is just the opposite: the medium renders

the text decidedly visible, so that it becomes an annoying intruder harassing the user every turn of the way. So trying to squeeze all print texts in the matrix of cybertext theory is just as incorrect an approach, in my view, as imposing postmodern and poststructuralist paradigms on cyberliterature.

As is obvious from this outline of Aarseth's theory of cybertextuality, the literary component is found markedly absent, even more so is any discussion of the aesthetic value of computer-mediated literary texts.³³ This certainly does not mean that cyberliterature is devoid of literary features and devices, consequently it is reasonable to incorporate a literary analytical approach, a close reading in its analysis, as well. The cybertextual perspective, which centers on a technical description of texts and works out a typology that accounts for the characteristics of the media, while focusing mainly on the computational ability of digital texts, has its merits too and can find important applications. To conclude, cybertextuality as a perspective on textuality taking into prime consideration the medium needs to be complemented by a literary analysis where the case of cyberliterature is concerned.

Cyberliterature and new media theory

Aarseth's rather formalistic theory of cybertextuality, which is built on the belief that the text should be conceptualized as information (1994 58), finds its place within the larger matrix of new media theory, which has also made an important contribution to the study of cyberliterature. Most of the new media theorists, who have helped reconceptualize cyberspace as a new writing and reading space, are indebted to Marshall McLuhan.³⁴ Their writings

³³ In "Cyber|literature and Multicourses: Rescuing Electronic Literature from Infanticide" (2001) K. Hayles comments on Aarseth's *Cybertext* and on Nick Montfort's review of it and she argues for preserving the various approaches of literary criticism to cyberliterature.

³⁴ For a full examination of McLuhan's ideas from the perspective of the digital revolution see Paul Levinson, *Digital McLuhan. A Guide to the Information Millenium* (New York: Routhledge, 1999).

incorporate two major pioneering McLuhanesque views. The first one is that technology is an extension of man, thus providing the axiom for the discussion of the interaction between body and machine. The second is that information is the dominant form of communication displacing narrative.

When analyzing how technologies function as an extension of man, McLuhan presumes two sets of technologies: those that are extensions of our sense organs, such as eyeglasses, and those that are extensions of other organs, as clothes are an extension of the skin and the wheels of a car of the foot. My interest is mostly in McLuhan's vision of technology of the first type and how it has supplemented and augmented our senses. One mode of the extension of the senses is their externalization through media.

Using the sense organs and the process of their 'innering' or 'outering' as a measure, McLuhan gives a three-stage chronology of human culture: oral culture, the Gutenberg era and the electronic age. In the Gutenberg era there is a cultivation of abstraction, a privileging of representation and a progressive innering of the senses. The electronic age brings about a reversal of this process, as "electronic technology extends our senses and nerves in a global embrace" (1994 247).

Marshall McLuhan and Walter Ong,³⁵ among others, have analyzed the ways print affected consciousness. McLuhan asserts that the book created a culture which mimicked the technology of the printing press in its linearity and sequentiality. He interprets the emergence of logical thought as a direct consequence of print culture: "A place for everything and everything in its place is a feature not only of the compositor's arrangement of his type fonts, but of the entire range of human organization of knowledge and action from the sixteenth century onward" (1995 285)

On the abstract level the strict sequencing of letters in the printed book leads to the linearity of communication, and to

³⁵ See Marshall McLuhan, *The Gutenberg Galaxy: The Making of Typographic Man* (Toronto: U of Toronto P, 1962); Walter Ong, *Orality and Literacy: The Technologizing of the Word* (London & New York: Routledge, 1991); Walter Ong, *Interfaces of the Word: Studies in the Evolution of Consciousness and Culture* (Ithaca and London: Cornell UP, 1977).

hierarchical ordering of thought and its representation. McLuhan sees linearity in contrast to networking. While in the Gutenberg era the organization of knowledge and thought is linear, a matter of causation and classification, in the electronic age additive relations – the connections of a network – become the dominant ones, as Scott Lash describes in his commentary on technological culture (174-184). In the electronic age there is a return of the non-linear and discontinuous from the era of orality. Moreover, the acceleration of technology in the 20th century ‘massages’ the sensorium, mostly privileging the visual sense. This leads to the hegemony of the eye-extension through the new technologies applied in various media: cinema, television and the computer.

In his “critique of information” Lash interprets McLuhan’s “the medium is the message.” For Lash the informational message becomes the paradigmatic medium of technological culture, supplanting the narrative. A similar distinction is made by Lev Manovich between narrative as the dominant form of print and database as the intrinsic repository of information in the digital age.³⁶ Currently the database emerges as the prevailing cultural form in the new media landscape that competes with the narrative, and can also support it. As a consequence, Manovich finds a significant shift in paradigmatic and syntagmatic relations. In print narrative the reader observes and follows the syntagmatic ordering of signs, while the paradigmatic exists only as an imaginable alternative. Databases, on the contrary, render paradigmatic relations often visually, or at least physically in the form of encodings, while their syntagmatic instantiation is rendered possible only in the actual realization of commands, triggered by the user.³⁷ These deliberations of Manovich are part of his sweeping and well-founded argumentation of the rise of the computer from a tool to a universal media machine. He analyzes the

³⁶ See Lev Manovich, *The Language of New Media* (Cambridge, Mass: MIT Press. 2001) 225-233.

³⁷ “The narrative is constructed by linking elements of this database in a particular order, that is by designing a trajectory leading from one element to another. On the material level, a narrative is just a set of links; the elements themselves remain stored in the database. Thus the narrative is virtual while the database exists materially.” (Manovich 231).

main principles of new media: numerical representation, modularity, automation, variability and cultural transcoding (27-48). Of special interest for the current analysis is the last principle – “transcoding” – which refers to the translatability of cultural artefacts into different formats, and which postulates that each piece of data (including text and image) has “a cultural layer” and “a computer layer.” Manovich focuses on the interpenetration of technology and culture, finding that “[t]he result of this composite is a new computer culture – a blend of human and computer meanings, of traditional ways in which human culture modeled the world and the computer’s own means of representing it” (46). Many other cultural critics also turn to the history of media to look for the most appropriate interpretation of the current stage of technological development. Thus, Jay Bolter and Peter Grusin coin the term “remediation” to describe the process where new media forms “define themselves by borrowing from and refashioning earlier forms in print, photography, radio, film and television” (1999 28).

Apart from media theory and the approaches discussed up to now, other methodologies have also found application in the study of the history and practice of cyberliterature. There are several major interdisciplinary methods that have gained currency in the discussion of cyberliterature in the last 15 years. One such approach incorporates narratology and examines its future in the new digital environment. Critics have discussed at length issues pertaining to narrative form and organization: plot, beginning, closure, point of view, etc.³⁸ Some argue that narrative is threatened by the

³⁸ See for example the issue “Technocriticism and Hypernarrative” dedicated to the exploration of narrative in the new media by practitioners and theorists – *Modern Fiction Studies* 43.3 (1997). Several major studies in the field of narrative in the digital environment are: Janet Murray, *Hamlet on the Holodeck: The Future of Narrative in Cyberspace* (New York: Free Space, 1997); Marie-Laure Ryan, *Possible Worlds, Artificial Intelligence and Narrative Theory* (Bloomington: Indiana U P, 1991) and her “Beyond Myth and Metaphor: Narrative in the Digital Media,” *Poetics Today* 23.4 (2002): 581-609; the collection of essays *New Screen Media: Cinema/Art/Narrative*, eds., Martin Reiser and Andrea Zapp. (London: British Film Institute, 2002). See especially the essays: Soke Dinkia, “The Art of Narrative – Towards the Floating Work of Art,” Jon Dovey, “Notes Toward a Hypertextual Theory of Narrative” and Eku Wand, “Interactive Storytelling:

new media, and can have no future as a contemplative creative form in the chaotic, neurotic, superficial and busy place that is cyberspace. Others claim that there is a potential for developing new, original narrative forms that are intrinsic to the new media, as is for example cyberliterature and interactive narrative.³⁹ The problem of narrative in the new media is one of the most explored areas of textuality in the new media. The future of narrative and literature has been examined from different perspectives in several important collections. Jörgen Schäfer and Peter Gendolla's *Beyond the Screen: Transformations of Literary Structures, Interfaces and Genres* (2010) offers an analysis of diverse products of digital culture such as interactive installations, multimedia performances, video games (i.e. immersive environments) and electronic literature from the perspective of the aesthetic experiences of human-machine interface in its greater variety.

Critics have also discussed the peculiarities of cyberliterature from a position that examines the interplay between immersion and interactivity⁴⁰ with a special focus on reader-response practice, theory and criticism. Among the most outstanding publications in the field are those by Marie-Laure Ryan, for example, her fascinating book-length study *Narrative as Virtual Reality: Immersion and Interactivity in Literary and Electronic Media* (2001), which examines the different forms proliferating in cyberspace from the perspective of her theory of possible worlds.

The Renaissance of Narration." Markku Eskelinen. "Introduction to Cybertext Narratology," *Cybertext Yearbook 2000*, eds. Markku Eskelinen and Raine Koskimaa (Research Centre for Contemporary Culture, University of Jyväskylä, Finland 2001) and others.

³⁹ See for example Mark Stephen Meadows, *Pause and Effect. The Art of Interactive Narrative* (Indianapolis: New Riders Press, 2002).

⁴⁰ Stephanie Strickland, "Moving Through Me as I Move: A Paradigm for Interaction," eds. Wardrip-Fruin and Harrigan (2004) 183-191. J. Yellowlees Douglas and Andrew Hargadon. "The Pleasures of Immersion and Interaction: Schemas, Scripts and the Fifth Business," eds. Wardrip-Fruin and Harrigan (2004) 192-196. Helen Thorington, "Loose ends/connections: Interactivity in networked space," *Style* 33:2 (Dekalb: Northern Illinois University, Summer 1999): 212-231. Brian Richardson. "Recent Concepts of Narrative and the Narratives of Narrative Theory," *Style* 34:2, (Dekalb: Northern Illinois University, Summer 2000): 168-175.

Of equal significance have been the endeavors to discover the pedagogical applications of cyberliterature and cybertext. In my opinion these will have a far-reaching application in the academic field as regards humanitarian studies in general, the newly emerging field of digital humanities, and more specifically the study of literature.

Some of the critics that started out with the study of cyberliterature have moved away from literary analysis altogether towards the examination of games, which have a dominant position in cyberspace.⁴¹ As games seem to be evolving into one of the intrinsic forms distinctive of the digital environment, numerous critics deem it essential to explore their formal properties and cultural significance. Many examples of cyberliterature include ludic features, hence a valid approach would be to analyze the possibilities offered by computer games as drama, narrative and simulation.

There are also Bulgarian critics who have studied cyberliterature. A serious contribution in this area is the collection *Reading in the Time of Media, Computers and the Internet*, eds. Ognyan Kovachev and Alexander Kiossev (2003). There are Bulgarian Internet sites dedicated to the digitalization and online publication of Bulgarian print literary texts, as well as newly written fictional texts, some of them in hypertextual format.⁴²

⁴¹ Such remarkable examples are the two volumes edited by Pat Harrigan and Noah Wardrip-Fruin, *First Person: New Media as Story, Performance and Game* (Cambridge, Mass: MIT Press, 2004) and the follow-up *Second Person: Role-Playing and Story in Games and Playable Media* (Cambridge, Mass: MIT Press, 2007). Espen Aarseth has also worked increasingly in the area of ludology, by founding the international journal of computer game research *Game Studies* <<http://gamestudies.org>> Markku Eskelinen and Stuart Moulthrop are also working in this field. Their work illustrates the debate between the two conflicting approaches to computer games: ludology and narratology, whilst they side with the first.

⁴² See George Chobanov, Георги Чобанов, "Литературата в интернет като институция" *Български език и литература*, 1999, кн. 5, с.60. The text is available online. 31 August 2008 <http://litclub.com/library/nbpr/emonik/lit_internet> Chobanov is the editor and administrator of the site for web hosting of Bulgarian literature and for critical analysis: *Liternet* <<http://litenet.bg>>. The other major site with similar function is *Literary club* <<http://www.litclub.com>>, founded by Emiliyan Nikolov. In addition, of special relevance to the current

Nowadays, cyberliterature has become a legitimate field of academic study, research and teaching. A number of books that have come out in recent years validate its important presence in cyberspace and in our technological culture, for instance, K. Hayles's *Electronic Literature: New Horizons for the Literary* (2008) which provides close readings of a number of electronic literature works, most of them included in Volume 1 of the online Electronic Literature Anthology of the Electronic Literature Organization, now hosted at MIT. Hayles's book provides the intellectual framework for introducing electronic literature in the curriculum and in the classroom as a substantial aspect of literary studies.

Further, Peter Gendolla and Jörgen Schäfer's *The Aesthetics of Net Literature: Writing, Reading and Playing in Programmable Media* (2007), a collection by internationally renowned scholars and authors from Germany, USA, France, Finland, Spain and Switzerland, reviews mainly aesthetic issues related to net literature (another term for eliterature and cyberliterature). The articles in the book focus on questions such as: In which literary projects can we discover a new quality of literariness? How can we productively link the logics of the play of literary texts and their reception in the reading process? What is the relationship of literary writing and programming?

A Companion to Digital Literary Studies (2008) is the most thorough survey to date of research and methodology in the field of digital literary studies from numerous leading scholars in the field. It is divided in three sections entitled traditions, textualities and methodologies. The collection, which is freely available online,⁴³ is intended as a general introduction in the field and as such is a very valuable resource. The list can be extended.

This overview of alternative approaches only serves to illustrate what a busy and varied field the study of computer-mediated

discussion are the many publications by Reneta Bozhankova concerning online literature, especially written in cyrillic, and the publications by Milena Tsvetkova on the act of reading in the new media.

⁴³ *A Companion to Digital Literary Studies*, eds., Ray Siemens, Susan Schreibman, Oxford: Blackwell, 2008. <<http://www.digitalhumanities.org/companionDLS/>>

textuality has become. Quite outside the scope of this book, but also deserving an honorable mention in academic research, is the field of wearable computers and of Virtual Reality, understood as a technologically generated artificial reality, related often to the literary theory of possible-world construction (Ryan 1999, 2000). Equally fascinating is the work of theoreticians (and practitioners) in the field of Artificial Life. However, examples of these appear in my analysis only as imaginary, construed by fiction “forms of life”.

Having presented the basic features, major alterations and relevant theoretical discussions of the textual body which resides in cyberspace, I now proceed with an outline and consideration of the human body modifications in cyberspace and the valid methodology for studying these transformations.

3. The Human Body

[T]his latest mutation in space – postmodern hyperspace – has finally succeeded in transcending the capacities of the individual human body to locate itself, to organize its immediate surroundings perceptually, and cognitively to map its position in a mappable external world [...] [T]his alarming disjunction point between the body and its built environment [...] can itself stand as the symbol and the analogon of that even sharper dilemma which is the incapacity of our minds, at least at present, to map the great global multinational and decentered communicational network in which we find ourselves caught as individual subjects.

(Fredric Jameson,
Postmodernism, or the Cultural Logic of Late Capitalism 44)

The body is instrumental to locating the self in space and time. The self is individuated through the body; therefore it is so crucial in any characterization of subjectivity. In the daily interaction with the computer the main experience is of simultaneously “being” and “not being” in cyberspace, which has aggravated the problem of locating

the body and hence of considering the problematic ontological status of the subject in technological culture. The repeated act of de/construction of the body in cyberspace appears as an outcome of the realization of the loss of its autonomy from technology. The urge to “leave the meat behind,” i.e. to become disembodied, has evolved into a powerful myth within the realm of cyberspace. Alternatively, the body can “enter” the digital environment, but only after it has undergone a serious transformation leading to its fusion with technology. The everyday interaction between human and machine leads to the obliteration of the boundary between them and their convergence into a posthuman entity.

It is important to situate the current philosophical exploration regarding what it means to be human in the larger Western intellectual tradition. In what follows I discuss only a few of the theories of the body pertinent to my analytical goals.

Philosophical concerns. Historical Perspective.

For me the difficulty in theorizing the body stems from the reality that each one of us *is a body* and *has a body*. As the physician Jonathan Miller notes: “Of all the objects in the world, the human body has a peculiar status: it is not only possessed by the person who has it, it also possesses and constitutes him” (1978 14).

The perspective that the human being *is a body* renders the body as enacting, living, as Subject. The perspective that one *has a body* puts the focus on the represented body, the body as imagined, as Object. It is of primary significance, in my view, that the connection between the two is realized currently through digital technology. For “the enacted body, present in the flesh on one side of the computer screen, and the represented body, produced through the verbal and semiotic markers constituting it in the electronic environment,” as Katherine Hayles asserts, “are brought into conjunction through the technology that connects them” (1999 xiii). Therefore, the theories that can be subsumed under the discipline of *body criticism*⁴⁴ I

⁴⁴ Barbara Maria Stafford, *Body Criticism: Imaging the Unseen in Enlightenment Art and Medicine* (Cambridge, Mass.: MIT Press, 1991).

divide into two large categories depending on the manner in which they conceptualize the body, i.e. either as being a body, or as having one.⁴⁵ Where can posthumanism be located in this rather schematic division?

The emergence of posthumanism is related to the enchantment with Artificial Intelligence, the development of cybernetics and the production of humanoid robots.⁴⁶ Tiziana Terranova defines posthumanism as “the belief in the artificially enhanced evolution” of humans (269). In their utopian visions posthumanists are generally looking forward to the times when a human mind will be loaded on a computer and the body, having become superfluous, will be discarded permanently.

The philosophical background for the discussion of posthumanism can be found in the debate about the meaning and crisis of humanism: from Nietzsche’s anti-humanism, which resonates with the end of theology marked by the Nietzschean “death of God”; the subsequent rise of anti-humanism as a resistance movement of the mid-twentieth century in the philosophies of Louis Althusser and Michel Foucault, who envisaged “the death of Man”; the postmodern death of all grand narratives, and of truth in all its

⁴⁵ For a systematic review of the critical study of the body from early modernity to the current period, see the chapter by Bernadette Wegenstein, “Making Room for the Body,” *Getting Under the Skin: Body and Media Theory*, (Cambridge, Mass.: MIT Press, 2006), Parts 3, 6 & 7 of *The Cybercultures Reader*, eds. David Bell & Barbara Kennedy

⁴⁶ Some important books on the designing of a posthuman are written mostly by “futurists”: Ray Kurzweil, *The Age of Spiritual Machine: When Computers Exceed Human Intelligence*, (Viking Adult, 1999); Hans Moravec, *Robot: Mere Machine to Transcendent Mind* (New York: Oxford UP, 2000). Rodney Brooks, *Flesh and Machines: How Robots Will Change Us* (New York: Pantheon, 2002); Gregory Stock, *Redesigning Humans: Our Inevitable Genetic Future* (London: Profile Books: 2002), Gregory Stock, *Metaman: The Merging of Human and Machines into a Global Superorganism* (Toronto: Doubleday, 1993); MIT Media Lab confounder Nicholas Negroponte, *Being Digital* (Vintage, 1995), and the first builder of a neural network simulator Marvin Minsky, *The Society of Mind* (New York: Simon and Schuster), 1986.

forms.⁴⁷ T. Terranova adds to the antecedents of posthumanism:⁴⁸ the modernist avant-garde of the Italian Futurists and the German Dada; the theories of Marshall McLuhan;⁴⁹ the guru of the psychedelic 1960s, Timothy Leary; the cyberpunk science fiction group of the 1980s as exemplified by the first cyberpunk anthology edited by Bruce Sterling;⁵⁰ the Extropy Institute in California, founded in 1988;⁵¹ the *Mondo 2000* magazine, and its successor *Wired*, launched in 1990 by a techno-artistic future-oriented group, where some of the ideas of posthumanism were articulated.⁵²

⁴⁷ For more information see the collection of essays Neil Badmington, ed., *Posthumanism* (New York: Palgrave, 2000). A significant contribution to the study of the emergence and history of posthumanism is the "Introduction: Approaching Posthumanism" provided by Badmington, pp.1-10. There are other approaches to posthumanism, for example, from the perspective of systems theory as illustrated in *Posthuman Metamorphosis. Narrative and Systems* by Bruce Clarke (Fordham University, 2008) and Cary Wolfe's *What is Posthumanism?* (University Of Minnesota Press, 2009).

⁴⁸ Tiziana Terranova, "Post-human unbounded. Artificial evolution and high-tech subcultures," *The Cybercultures Reader*, eds. D. Bell & B. Kennedy. (London & New York: Routledge, 2000) 268-279.

⁴⁹ One such example: "The extension of any one sense alters the way we think and act – the way we perceive the world. When these ratios change, men change." M. McLuhan and Quentin Fiore, *The Medium is the Massage: An Inventory of Effects* (New York: Bantam, 1967) 41; and the even more memorable quote: "Man is beginning to wear his brain outside his skull and his nerves outside his skin; new technology breeds new man." Marshall McLuhan, "Playboy Interview: Marshall McLuhan – a candid conversation with the high priest of popcult and metaphysician of media," *Playboy*, (March 1969) 74.

⁵⁰ Bruce Sterling, *Mirrorshades: The Cyberpunk Anthology* (New York: Arbor House, 1986).

⁵¹ The Extropy Institute closed in late 2006, but the ideas of this group are still available at their site. 15 June 2008 <<http://www.extropy.org/>> On this site one can also find a description of transhumanism, as a stage in the evolution of humans preceding posthumanism. Elaine Graham gives the following definition of the term transhuman: "a conflation of transitional human, or one augmented and modified on the way to being *posthuman*, the fully technologized successor species to organic *Homo sapiens*" (9).

⁵² *Mondo 2000* was a magazine which originated in San Francisco in the 1980s, was published through the 1990s, and eventually became an international forum for computer counterculture, focusing on issues such as cyberpunk writing, Virtual Reality, hardware and software, and smart drugs. Its last issue came out in 1998. The writers that became exponents of the cyberpunk movement, for example,

Neil Badmington, too, underscores the attack on humanism by popular culture in general and science fiction in particular. Posthumanism can also be said to draw on the critical ideas of Jean Baudrillard, who has written of “the growing cerebrality of machine” (34) and that “the extermination of man has started” (35),⁵³ on Ihab Hassan’s cultural commentary,⁵⁴ on Jean-Francois Lyotard’s notion of the inhuman,⁵⁵ and Francis Fukuyama’s deliberations about the biomedical future of humans,⁵⁶ who have all debated about the extent, value and effect of emergent posthumanism from a larger, cultural and philosophical perspective.

The attitudes to technology, by and large, range from resistance to resignation, from acceptance to reliance on it. In the words of M. Joyce, “What we are used to we often become used by” (1997 167). Posthumanism, which, in my view, reflects these reactions, can be construed as an outcome not only of extreme forms of techno-optimism and cyber-hype, but of the techno-fear that has assailed our civilization. The digital machine is both friend and foe. It threatens to destroy humans just as much as it promises to serve them. This can explain why the pervasive existence of technology in social space is marked simultaneously by the increased denial of the body and by the unrelenting flux of subjectivity. McLuhan sees this

William Gibson and Bruce Sterling were published there. It was much more radical than its online successor, the magazine *Wired*, which was launched in 1993 with the goal of exploring the effect of technology on culture, politics and economics. 21 May 2006 <<http://www.wired.com/wired>>

⁵³ Jean Baudrillard, “Prophylaxis and Virulence,” *Posthumanism*, ed. Neil Badmington 34-41.

⁵⁴ “At present posthumanism may appear variously as a dubious neologism, the latest slogan, or simply another image of man’s recurrent self-hate. Yet posthumanism may also hint at a potential in our culture, hint at a tendency struggling to become more than a trend [...] We need to understand that five hundred years of humanism may be coming to an end, as humanism transforms itself into something that we must helplessly call posthumanism.” Ihab Hassan, “Prometheus as Performer: Towards a Posthumanist Culture? A University Masque in Five Scenes”, *Georgia Review*, 31 (1977), 843.

⁵⁵ Jean-Francois Lyotard, “Can Thought Go on Without a Body?” *Posthumanism*, ed. Neil Badmington, 129-140.

⁵⁶ Francis Fukuyama, *Our Posthuman Future. Consequences of the biotechnology revolution* (New York: Picador, 2002).

process originating many centuries ago – for him it is concurrent with the invention of writing. For that is when “[t]he whole man became fragmented man; the alphabet shattered the charmed circle and resonating magic of the tribal world, exploding man into an agglomeration of specialized and psychically impoverished individuals, or units...” (1962 59).

Any discussion of posthumanism should begin with the awareness that this is not a consistent or unified body of thought, but that there are two clearly differentiated strains within it: the radical technocentric approach of those who would go to extremes in denying the body; and those who hold a more restrained, moderate and reasonable point of view, which I refer to as anthropocentric posthumanism.

Secondly, in philosophical terms the ideas of both the ‘hard’ and the ‘soft’ varieties of posthumanism conflate with the systemic view of the body, a position which considers the body as structured, organized, coded. From a historical point of view the modern approach to the body appears with the rise of modern medicine. It is no longer seen as a system of flowing humors, it is now a device of interacting organs. From the 18th century onwards the body-as-system has been conceptualized in machinic terms: a clock, a thermodynamic machine. Posthumanism extends this conceptualization of the body, namely as data, code, informational pattern.

By presuming that the body is a patterned organization of information, K. Hayles explains the potential of disembodiment in cyberspace, by revealing “how information lost its body, that is, how it came to be conceptualized as an entity separate from the material forms in which it is thought to be embedded” (1999 2). Indeed it is this very process that can explain the effortless discarding of the body in the more extreme forms of posthumanism: “When information loses its body, equating humans and computers is especially easy, for materiality in which the thinking mind is instantiated appears incidental to its essential nature” (Hayles, 1999 2).

This equating of communication and disembodiment is at least a century old and is associated with the appearance of the telephone, where the physical body is erased as well in the act of

communication. A similar idea is expressed by McLuhan: “In this electric age we see ourselves being transplanted more and more into the form of information, moving toward the technological extension of consciousness. That is what is meant when we see say that we daily know more and more of ourselves into other forms of expression that exceed ourselves” (McLuhan, 1994 57). Building on these main characteristics of posthumanism, I proceed with the examination of the two varieties and the views that define them.

3.1. Having a Body: Radical, Technocentric Posthumanism

There is an overlap between radical posthumanism, liberal humanism, Cartesian dualism and the ambiguity with which Christianity approaches the body.⁵⁷ Hence, I discuss them alongside each other, drawing parallels and distinctions where necessary and underlining relevant arguments.

Liberal humanism envisages the human as possessing a body that is part of nature, an object to be controlled and subdued, and which is not identified with selfhood.⁵⁸ In this context the physician Jonathan Miller has noted: “The possession of a body may be the necessary condition of being a person but it is not a sufficient one” (14). The locus of the humanist subject is the mind. This leads to one of the most established views in Western philosophy and in radical posthumanism: *the body in absentia*. The body in Plato’s view, for example, is not essential to the subject’s identity, but is rather an impediment to the functioning of the soul. According to him the body with its deceptive senses keeps the soul from attaining real knowledge, and from understanding reality, love and beauty.

⁵⁷ For the similar and distinctive points between posthumanism and various approaches to the body see K. Hayles, “Toward Embodied Virtuality” 1999 1-24.

⁵⁸ Hayles holds the same view that “the erasure of embodiment is a feature common to *both* the liberal humanist subject and the cybernetic posthuman” (1999 4). To this she adds: “To the extent that the posthuman constructs embodiment as the instantiation of thought/information, it continues the liberal tradition rather than disrupts it” (5).

Indeed, he repeatedly presents the body's relation to the soul as one of a tomb (*Gorgias*), or as barnacles or rocks holding down the soul (*The Republic*). Thus, for instance: "In the *Cratylus* Plato claims that the word body (soma) was introduced by Orphic priests, who believed that man was a spiritual or noncorporeal being trapped in the body as a dungeon."⁵⁹ Plato's denial of the body is mirrored by the denial of the body by the radical strain of posthumanist thought, as will be explained further.

A similar suspicion of the body can be traditionally found in Christianity. There is, however, also a marked ambivalence in the treatment of the body. Indeed, if the soul is potentially divine, why then is the body (or parts of it) of sainted people revered so? Why is it enshrined and believed to have healing power? A telling example of this ambivalence is the story of the body of St. Mark as represented in two paintings by Tintoretto.⁶⁰

The first painting entitled *The Removal of the Body of St. Mark* has for its subject matter the stealing of the body by Venetian merchants. Mark, who founded the Church in Alexandria, outraged the pagans with his miracles and so they dragged him to death. His Christian followers placed his remains in a tomb, which was greatly venerated. His body rested there from about 68 A.D. until 815, when it was practically stolen from the catacombs by Venetian merchants taking advantage of a hurricane, as the painting shows (see Figure 4). The Venetians carried the remains of his body to their city, where he has since been honored as its patron saint. The magnificent Basilica of Saint Mark was built above his second tomb, and the legends connected with him have been fully illustrated by Venetian artists in the temple.

⁵⁹ Elizabeth Grosz, *Volatile Bodies: Toward a Corporeal Feminism* (Bloomington: Indiana U P, 1994) 5.

⁶⁰ Tintoretto (1518 – 1594), born Jacopo Comin, known as Jacopo Robusti, and also as Il Furoso, for the fury with which he painted, was one of the great masters of the Venetian school. The three works that won him public acclaim were painted for Scuola Grande di San Marco in 1548 and featured St. Mark.



Figure 4. Tintoretto, *The Removal of the Body of St. Mark* (1562/66)
Gallerie dell'Accademia, Venice, Italy

The second painting by Tintoretto *The Finding of the Body in the San Marco Basilica* refers to the recovery of the saint's body in 1094, when the third basilica was under construction. The body, which had been temporarily lost, was once again discovered in a column in the church. In the painting the saint 'appears' and points to the place where his body is hidden (Figure 5).



Figure 5. Tintoretto, *The Finding of the Body of St. Mark in San Marco Basilica* (1562/66), Pinacoteca di Brera, Milan, Italy

In the second painting St Mark's body actually has three occurrences: firstly, on the left, as the incarnation in the flesh of the saint, who appears to point exactly to the place where his actual body is to be found; secondly, as his body is exhumed from a column in the Basilica's construction, and finally as the recovered dead body placed on the marble ground. Both paintings tell a narrative in which the body plays a central role. In addition the body is also foregrounded in the paintings through composition and light.

What this merging of Christian religion and Renaissance mastery reveals is that the body, usually interpreted as the site of devilish desires and base instincts, which needs to be severely chastised, is at the same time worshiped as a sanctified relic. On the one hand,

Christianity upholds the view that the flesh is weak, and in the same way radical posthumanism upholds that the body is the frail link in the human-machine loop. Concurrently, there is a respect in religion for the lifeless material container of the deceased, which is believed to possess miraculous healing power. This *ambivalent attitude to the body* is common for Christian religion and the philosophical musings about cyberspace. Cyberspace is the new site of old religious convictions, where the body is simultaneously renounced as ‘meat’ and resurrected in a virtual body, where it can exist eternally in ethereal spheres.

The split between mind and body deepens at the time of the Enlightenment with the rejection of the body as the site of unruly passions and contaminating fluids; as an obstacle to rational thought. With the brief “*Cogito, ergo sum*” mathematician and rationalist philosopher Rene Descartes (1596 – 1650) extols reason as awareness and knowledge. Thought is disembodied, for the body is objectified and seen as the Other to the subject of knowledge, Descartes does not conceive of the body as part of the subject, but as part of nature that has to be controlled and mechanized. The body is associated with gross physicality. It is “*res extensa*” – the *machine-like corporeal substance*, standing in binary opposition to “*res cognitas*” – the powers of intelligence and the site of selfhood. This is the description of the body offered by Descartes:

By the body I understand all that which can be defined by a certain figure: something which can be confined in a certain place, and which can fill a given space in a such a way that every other body will be excluded from it; which can be perceived either by touch, or by sight, or by hearing, or by taste, or by smell: which can be moved in many ways not, in truth, by itself, but by something that is foreign to it, by which it is touched [and from which it receives impressions]: *for to have the power of self-movement, as also of feeling or of thinking, I did not consider to appertain to the nature of body ...*

(1997 141, emphasis added)

Again this view is appropriated by radical posthumanists. One example of the extreme version of posthumanism that is often cited is Hans Moravec's book *Mind Children*,⁶¹ who argues that human beings are informational patterns, rather than bodily presences, a view that seems to be substantiated by recent scientific developments, such as the Human Genome Project, the Visible Human Project, and cloning, to name a few. Just as in the plot of a cyberpunk novel, Moravec envisions the transference of a human consciousness on a computer and has a robot surgeon perform the action. The brain is destroyed and the body, emptied out of consciousness, becomes redundant. A new post-biological age is envisaged, "as intelligent robots design successive generations of successors, technical evolution will go into overdrive. Biological humans can either adopt the fabulous mechanisms of robots, thus becoming robots themselves, or they can retire into obscurity" (Moravec, 1988 121). Similar ideas are expressed by the Extropians on their site and in *Mondo 2000*, for example.

Led by the realization of the potential threat of the machine, radical posthumanists sacrifice the body, while hoping to 'preserve the mind' and ensure its immortality by its conflation with the machine. Within this group, which is by no means a homogeneous one, the understanding prevails that human subjectivity is partial, polymorphous and adaptable, but, most significantly, that it does not reside in the body. With this contention radical posthumanism aims at overcoming the imperfections of the flesh: sickness, fatigue, unreliability, mortality. However, in this dream to prolong life and improve its quality, where does one draw the line to the enhancement and/or augmentation of the body and to potential disembodiment?

Radical posthumanism, therefore, casts off the body altogether and all the irrelevant functions of the flesh – not just its biological strata, but its emotional and psychological "aspect" as well. As Australian-born performance artist Stelarc believes: "Technology is not only attached but is also implanted. ONCE A CONTAINER, TECHNOLOGY NOW BECOMES A COMPONENT OF

⁶¹ Hans Moravec, *Mind Children: The Future of Robot and Human Intelligence*. (Cambridge, Mass: Harvard UP, 1988). Moravec is director of the Mobile Robot Lab at Carnegie-Mellon University in Pittsburgh.

THE BODY. As an instrument, technology fragmented and depersonalized experience – as a component it has the potential to SPLIT THE SPECIES. It is no longer an advantage to either remain “human” or evolve as a species. EVOLUTION ENDS WHEN THE TECHNOLOGY INVADES THE BODY” (563).

Stelarc calls for a hardening and hollowing out of the organic body in an effort to make it more durable and functional. The hollow body can become a container of implants and various technological devices. Mark Dery analyzes the cybernetic body art of Stelarc, and concludes that the artist has developed a new aesthetics of prosthetics and a philosophy of posthumanism, whereby he tries to restructure and hypersensitize the human body, becoming an architect of internal body space.⁶² The body is “reconceived as an ‘it’”, rather than an ‘I’” (Dery 581). Dery finds that Stelarc’s view on the body is rather sadomasochistic, because the body becomes traumatized by its objectification, it is disconnected from its functions by technological mediation and has to recourse to symbiosis, which is reminiscent of McLuhan’s “traumatic autoamputation” (Dery 583). However, despite his rather fanatic refutation of the natural body, Stelarc in his performances actually foregrounds the body, albeit as always technologically mediated. So Elaine Graham finds that Stelarc has demonstrated “the reconstitution of the human body-self within transformative networks of technologies of extension, incorporation and immersion” (198). She interprets his posthuman views as “a radical questioning of the precepts of modernity concerning the self-evidence of the rational autonomous, self-actualizing subject at the heart of the teleology of emancipation” (198).

Radical posthumanism is modernist in its utopian view of science as progress and panacea, and postmodernist in its dystopian view of the fragmentation of the subject. But there is a more affirmative strain of posthumanism that puts the stress on the human and the preservation not of the abstract ideal body, but of embodiment. The main points of this softer variety of posthumanism, which are analogous to many feminist and poststructuralist theories of body criticism, are outlined below.

⁶² Mark Dery. “Ritual Mechanics. Cybernetic body art,” eds. Bell and Kennedy, 2000, 577-587.

3.2. *Being a Body: Moderate, Anthropocentric Posthumanism*

In opposition to the body/soul dualism that links liberal humanism, Christianity, Cartesian dualism and radical posthumanism stand feminist and postcolonial theories, as well as moderate posthumanism, which focus on *the human as being a body*. They approach the body as a differential and fluid construct, by consistently presenting a phenomenology of embodiment, not looking for universality in an abstract body, but for distinction along the lines of race, gender, ethnicity, social and class position. Feminist phenomenology builds on Benedictus de Spinoza's theory of the relation between mind and body. The philosopher posits in the Scholium to Proposition 2 to Book III of *Ethics* that: "*the mind and the body are one and the same thing*, which is conceived now under the attribute of thought, now under the attribute of extension"⁶³ (emphasis added). Moira Gatens suggests that in the feminist theoretical movement of the 1980s there is a return to Spinoza's metaphysics and pantheistic monism, in which "the body is not part of passive nature as ruled over by an active mind, but rather the body is the ground of human action" (1988 68). She sums up Spinoza's contribution to feminist criticism:

The Spinozist account of the body is of a productive and creative body which cannot be definitely "known" since it is not identical with itself across time. The body does not have a "truth" or a "true nature" since it is a process and its meanings and capacities will vary according to its context. We do not know the limits of this body or the powers that it is capable of attaining. These limits and capacities can only be revealed in the ongoing interactions of the body and its environment.

(quoted in Grosz 12) ⁶⁴

⁶³ Benedictus de Spinoza, *Ethics*, Ebook, (Xinware Corporation 2007) 50. For further clarification of the complex issue of the relation between body and mind in Spinoza's philosophy see Jonathan Bennett, "Spinoza's Mind-Body Identity Thesis" *The Journal of Philosophy*, Seventy-Eighth Annual Meeting of the American Philosophical Association Eastern Division, 78.10 (Oct., 1981) 573-584.

⁶⁴ For an in-depth study of Spinoza's philosophy see Moira Gatens and Genevieve

This understanding of the harmonious unity between body and soul and the Universe can be found in ancient Eastern philosophies. It infuses the American philosophy of transcendentalism that was also deeply influenced by Spinoza's ideas. This view can be illustrated by Walt Whitman's famous "Come, Said My Soul," first published in the Christmas issue of the *New York Daily Graphic* in 1874 and used as the title-page epigraph of the 1879 edition of his monumental *Leaves of Grass*. A similar attitude and sentiment marked by pantheistic monism, with the only significant difference that it envisages a fusion between human, nature *and* machine, imbues Richard Brautigan's poem "All Watched Over by Machines of Loving Grace," first published in 1967, long before computers became a reality.

The moderate version of posthumanism is linked to some extent to the reappraisal of nature, digital machines and humans living in harmonious bliss. What is common for the theories that focus on one 'being a body' is that they insist (1) on its materiality, (2) on its interaction with environment, and (3) on the lived, experienced body in its various actualizations.

Postmodernism in general, and feminism in particular, question the stability and givenness of the biologically determined body. By deconstructing the familiar boundaries and dichotomies, such as mind versus body, and male versus female, these theories present the body not as biologically determined, but as socially and culturally constructed. The body is a surface that is inscribed, discursively produced – an idea put forward by Michel Foucault, who has systematically studied the relationship between embodiment, power and knowledge. He has researched the connection between the everyday body, the regulatory disciplinary strategies and discursive practices that shape its form and behavior and which construct the "docile body." The idea of the constructed body is also expressed by the feminist critic Elizabeth Grosz through the apt collocation, the "volatile body," which refers to a new non-hierarchical, non-oppositional understanding of the body and subjectivity. Margrit Shildrick and Janet Price also find that: "The universal category

Lloyd, *Collective Imaginings: Spinoza, Past and Present* (New York: Routledge, 1999).

of the body disappears, but not in a complete denial of the body, but in favor of *a fluid and open embodiment*. At any given moment we are always marked corporeally in specific ways, but not as an unchanging or unchangeable fixture” (1999 8, emphasis added). Moreover, the body is perceived as dynamic, stratified, in-the-making.

When these views are incorporated in posthumanism they suggest an alternative way of conceiving of the body in cyberspace. The human is envisioned as extended and merged with the machine in an affirmative way. Such an approach prevails in the writings of Katherine Hayles,⁶⁵ Robert Pepperell,⁶⁶ Don Ihde⁶⁷ and Mark Hansen,⁶⁸ (the last two ‘rewrite’ Merleau-Ponty’s phenomenology from a posthumanist perspective), Bernadette Wegenstein,⁶⁹ and some feminist critics of the posthuman body. As examples of the latter, Judith Halberstam and Ira Livingston assert that the posthuman body is “a technology, a screen, a projected image” (3). It is in effect a techno-body. However, Halberstam and Livingston add that: “The posthuman does not necessitate the obsolescence of the human: it does not represent an evolution or devolution of the human. Rather it participates in re-distributions of difference and identity” (10).

K. Hayles has suggested, in my view, a valid and reasonable interpretation of posthumanism. She insists on presenting the posthuman not as an entity with a hollow body, but as a view, as one *evolving perspective on the human*. She explains:

Whether or not interventions have been made on the body, new models of subjectivity emerging from such fields as cognitive science and artificial life imply that even a biologically unaltered *Homo Sapiens* counts as posthuman.

⁶⁵ See Katherine Hayles, 1999.

⁶⁶ Robert Pepperell, *The Posthuman Condition. Consciousness beyond the Brain* (Portland, Or.: Intellect, 2003).

⁶⁷ Don Ihde, *Bodies in Technology* (Minneapolis: U of Minnesota P, 2002).

⁶⁸ Mark Hansen, *Bodies in Code. Interfaces with Digital Media* (New York: Routledge, 2006).

⁶⁹ Bernadette Wegenstein, *Getting Under the Skin: Body and Media Theory* (Cambridge, Mass.: MIT Press, 2006).

The defining characteristics involve the construction of subjectivity, not the presence of nonbiological components.
(1999 4)

Then she proceeds to define and challenge the radical posthumanist claims. Firstly, she explains that “the posthuman view privileges informational pattern over material instantiation, so that embodiment in a biological substrate is seen as an accident of history rather than an inevitability of life” (1999 2). Secondly, “the posthuman view considers consciousness ... as an epiphenomenon,” rather than as the seat of human identity (3). Thirdly, radical posthumansim considers the body to be the original, but extendable and replaceable prostheses. And finally, but most importantly, “the posthuman view configures human being so that it can be seamlessly articulated with intelligent machines” (3).

Hayles’ analysis of the posthuman unfolds against the history of cybernetics formulated as a discipline in the twentieth century and its arguments for disembodiment, which she traces in three successive periods from the Macy’s Conferences on Cybernetics in the 1940s, by introducing the idea of homeostasis, through the 1960s’ notion of reflexivity, and finally, to the concept of virtuality from the 1980s onwards, which centers on the transformation of the human into a disembodied posthuman.

While stating that “[t]he posthuman subject is an amalgam, a collection of heterogeneous components, a material informational entity whose boundaries undergo continuous construction and reconstruction” (1999 3), she warns that the present moment is a critical juncture, “when interventions might be made to keep disembodiment from being rewritten, once again, into prevailing concepts of subjectivity” (5). Hayles sees “the deconstruction of the liberal humanist subject as an opportunity to put back into the picture the flesh that continues to be erased in contemporary discussions about cybernetic subjects” (5).

In the chapter “The Materiality of Informatics” Hayles suggests a more flexible way of treating the issue of embodiment today. The body envisioned as disappearing is crossed out by the current ideology of dematerialization. Following what was already

discussed in relation to the contribution of postmodern and feminist criticism of the body, especially by Foucault and Grosz, Hayles claims too that even though *the body can disappear, embodiment cannot*, for it is “contextual, enmeshed within the specifics of place, time, physiology, and culture, which together compose enactment” (1999 196). Hayles’ constructive and human-assertive model of posthumanism posits that: “it is not a question of leaving the body behind but rather of extending embodied awareness in highly specific, local, and material ways that would be impossible without electronic prosthesis” (1999 291).

Technological change defines the human environment, so the human body must continuously reorganize itself. Having accepted this as common knowledge, it is logical to argue that these new technologies do not change us biologically or genetically, unless they are incorporated biologically and/or genetically. Graham clearly charts out the distinction between the radical and moderate positions in posthumanism:

The ‘end of the human’ need not necessarily entail a choice between ‘impersonal deterministic technologized posthumanism’ and ‘organic unmediated autonomous “natural” subjectivity,’ but may involve modes of post/humanity in which tools and environments are vehicles of, rather than impediments to the formation of embodied identity.

(199)

Instead of the demonization of technology or of the utopian rhetoric of radical posthumanism, the philosophical stance, as assumed by the moderate, anthropocentric variant of posthumanism outlined above, provides a theoretical framework for discussing embodiment and subjectivity in technological culture. Posthumanism envisages the body as a hybrid, as a body in process, in a way that it comes to signify the dispersal of subjectivity. The posthuman perspective can contribute to the discussion of the problematic mapping out of human subjectivity and embodiment in cyberspace.

As human bodies become technologically enhanced it is now quite evident that the flesh cannot be “cannibalized” by the machine. Consciousness studies, exemplified here by Robert Pepperell’s ground-breaking book first published in 1995, has been developing in recent years alongside the other major preoccupations of the technological culture with cybernetics, artificial intelligence, genetic manipulation and the rise of different manifestations of the posthuman. Consciousness studies has two important implications for the current discussion. Firstly, it maintains that consciousness is embodied and secondly, it claims that minds, bodies and the world are continuous. In other words, as much as consciousness is dependent on the body, so the human is dependent on his/her surroundings (Pepperell 20).

Pepperell records that even though computer modeling has given rise to new theories about the origin, nature and operation of the universe, referred to as the “Computational Universe,”⁷⁰ the notion of ‘embodied’ intelligence is nowadays the powerful, dominant paradigm in artificial intelligence research and human-machine interaction. Intelligence is understood to be a function of the brain processing capacity, just as much as it is of “the bodily vehicle” and “the organism’s interaction with the environment” (18).

Thus Pepperell reiterates the major tenets of Merleau-Ponty’s phenomenology. The first major position that I refer to is the phenomenological focus on the body, for “our body is not in space like things; it inhabits or haunts space. [...] For us the body is much more than an instrument or a means; it is our expression in the world, the visible form of our intentions” (1964 5). Secondly, the body is not passive, but is foremost an active, perceiving body. Merleau-Ponty posits the convincing claim that:

The perceiving mind is an incarnated mind. I have tried, first of all, to reestablish the roots of the mind in its body and in its world, going against the doctrines which treat perception as a simple result of the action of things on our body, as well as against those which insist on the autonomy

⁷⁰ Also analyzed by Hayles 1999, 239-44 and 2005, 20-27.

of consciousness. These philosophies commonly forget [...] the insertion of the mind in corporeality.

(1964 3-4)

Don Ihde, who writes from the position of a phenomenological materialist (XV), a position which I share, has conceptualized the different views on the body – as biological organism and as discursively constructed social entity – in two major categories. “Body one” in his terminology refers to the “motile, perceptual and emotive being-in-the-world” (XI) as posited by Merleau-Ponty’s phenomenology of being-a-body. Ihde elaborates that “body one” is “the existential body of living, here-located bodily experience” (69). It is through the perceiving, active being-a-body that a human experiences the surrounding world. For the purposes of the current analysis “body one” is of primary importance. Not only is the interaction with environment (including cyberspace) the means through which humans learn about it, but this interaction depends mainly on perception. According to Merleau-Ponty’s anti-Cartesian phenomenology, perception stands for “the originary opening to the world” (Ihde 70).

“Body two” is the culturally and socially constructed body; it is the docile body of the Foucauldian agenda, i.e. the body that is marked by race, gender, social position, etc. and always so in a concrete form of embodiment. As Ihde asserts, phenomenology places the subject “*in the world* – but as embodied and in a perspective” (74, emphasis in the original). This position as a matter of fact reiterates Merleau-Ponty’s central claim: “I am conscious of my body via the world ... I am conscious of the world through the medium of my body. I am already outside myself, in the world” (2002 82). Ihde insists on the axiomatic role of embodiment, and that the body is only “hidden” in cases when disembodiment is desired, as by the characters of cyberpunk writing and the enthusiasts striving towards transcendence in cyber-utopia.

On the basis of this categorization Ihde defines the human-technology interaction. For him this is a bipartite interaction, whereby (1) the human experiences the world through technology and (2) technologies can also be interpreted as embodied. An illustration of

both types of interaction is the famous example, that Merleau-Ponty gives, of the blind man with a cane, and how his “body is extended through the cane, which becomes part of his here-body experience” (Ihde 7). Thus, the materiality of technology perceived through the senses is what allows technology to extend and modify the feeling of embodiment, sometimes in radical ways, as is the case with prostheses or Virtual Reality experiences. Even though cyberspace is considered to be virtual, i.e. immaterial, building on Don Ihde’s interpretation of Merleau-Ponty’s philosophical claims, I contend that cyberspace, being part of the surrounding environment, is also perceived through the senses of the active body.

The body is not just a given, not only a biological organism, but is both signifying and signified, historically contingent, a social and discursive object. The human body is apprehended not in isolation, but is influenced by the contexts in which it is situated, hence the significance of the context of cyberspace, with which the body interacts. The body is constructed in cyberspace, through cyberspace as well.

In technological culture the body is still a substantial corpus. The mind continues to perceive through the bodily senses, hence embodiment is indispensable. As Jonathan Miller indicates, “It is by and through our bodies that we recognize our existence in the world, and it is only by being able to move in and act upon the world that we can distinguish it from ourselves” (14). While radical posthumanism as digital ideology continues the disembodiment tradition, digital technology, as a medium, actually privileges bodily presence – a contention that the analysis aims to illustrate.

CHAPTER TWO

CYBORGS IMAGINED: PAT CADIGAN'S *SYNNERS*

By the late twentieth century, our time, a mythic time, we are all chimeras, theorized and fabricated hybrids of machine and organism; in short, we are cyborgs. The cyborg is our ontology; it gives us our politics. The cyborg is a condensed image of both imagination and material reality, the two joined centres structuring any possibility of historical transformation.

Donna Haraway "The Cyborg Manifesto"

Change for the machines.

Pat Cadigan *Synners*

Pat Cadigan's *Synners* noticeably differs from cyberpunk literature, where disembodiment is extolled. In *Synners* Cadigan draws images of the body in their multiplicity and variability, their re-construction and modification through technology, while simultaneously stressing that bodies do not function simply as disposable signs of identity, but as the quintessence of such.

1. Cyborg

Why the cyborg? Because "thinking about human-machine relations through the figure of the cyborg keeps the body in view, while also raising vital questions about the boundaries of the body, about nature, culture and technology ..." (Bell, 2001 149-150). Marked by impurity and hybridity the body of the cyborg is a pretext for the discussion of larger cultural and ideological issues of the technological age.¹ The cyborg, though a product of

¹ "The image of the body has historically recurred at moments of radical social and cultural change. [...] imaginary representations of cyborgs take over when traditional bodies fail. In other words, when the current ontological model of human being does not fit a new paradigm, a hybrid model of existence is required

the imagination, is not currently part only of futuristic visions, but of the digital (virtual), and everyday reality. In Real Life² this merging of human and machine can be seen in different areas, so the establishment of conceptual limits and boundaries becomes a complex process. In medical and biological terms many people have received technologies in their bodies, including machinic parts, which supplement or substitute malfunctioning or damaged organs. But before becoming a Real Life entity, an actual living being, *the cyborg was a narrative construct*. The body-technology fusion was discursively imagined in cyberpunk fiction, where it appeared as a figment of the imagination.

Parallel to the fictional discourses are the non-fictional ones, where the cyborg originally appeared. Its genealogy can be traced to the fields of medical and military research, as well as of space programs, from where the term entered political and gender discourses. As such the cyborg embodies in postmodernist terms the qualities of hybridity, marginality, pastiche and irony. Even if one does not accept that humans have literally merged with the machines in the manner envisioned by cyberpunk fiction and popular culture discourse, one should recognize that humans have been culturally transformed into cyborgs, for in the human-computer interactive loop, they are constantly interfacing with the machine.³

Historically the cyborg has a life-enhancing and life-saving meaning. The cyborg image of the body was first introduced by scientific and technological discourse, more specifically by the science of cybernetics.⁴ For Norbert Wiener, founder of this

to encompass a new, complex and contradictory lived experience.” Jennifer Gonzales, “Envisioning Cyborg Bodies. Notes from current research,” ed.et.al. David Bell (London and New York: Routledge, 2000) 542.

² Real Life is used in opposition to the term Virtual Life in cyberspace.

³ I understand the term interface as it has been defined by Heidi J. Figueroa-Sarriera in his analysis of Hans Moravec’s *Mind Children: The Future of Robot and human Intelligence* (1988). “[T]he term “interface” itself means a surface forming a common boundary, a meeting-point or area of contact between objects, systems, etc.” “Children of the Mind with Disposable Bodies. Metaphors of self in a text of artificial intelligence and robotics,” ed.et.al. Chris Hables Gray *The Cyborg Handbook*. (New York: Routhledge, 1995) 129.

⁴ For an examination of the origin of the cyborg concept as a cybernetic organism

science, the common ground for body and machine is organization, especially in terms of patterns, and messaging, i.e. communication.

The metaphor to which I devote this chapter⁵ is one in which *the organism is seen as message*. Organism is opposed to chaos, to disintegration, to death, as message is to noise. To describe an organism, we do not try to specify each molecule in it, and catalogue it bit by bit, but rather to answer certain questions about it which reveal its pattern: a pattern which is more significant and less probable as the organism becomes, so to speak, more fully an organism.

(1954 95, emphasis added)

From this perspective the image of the body becomes more one of a communications network; hence information and feedback turn into the definitive aspects of organism and machine alike. Wiener elaborated on the analogy between body and machine under the general heading of automata, based on the similarities he found in their control mechanisms and communicational organization.⁶ For him automata can be either “in metal or in flesh,” and their study represents “a branch of communications engineering and its cardinal notions,” which include message, noise, quantity of information and coding technique (1948 54). After observing that there are analogies in the behavior of a machine and a living organism, he even goes so far as to reconceptualize “life,” when stating that it is “best to avoid all question-begging epithets such as ‘life’, ‘soul’, ‘vitalism’, and the like, and say merely in connection with machines that there is no reason why they may not resemble human beings in representing

in the context of the science of cybernetics from the 1940s until the invention of the neologism “cyborg” by Clynes and Kline in the 1960s, see David Thomas’ “Feedback and Cybernetics: Reimaging the Body in the Age of the Cyborg,” *Cyberspace/Cyberbodies/Cyberpunk: Cultures of technological embodiment* eds. M. Featherstone & Roger Burrows, (London: Sage, 1995) 23-38.

⁵ Norbert Wiener refers to the chapter “Organization as the Message” *The Human Use of Human Beings: Cybernetics and Society*, 2nd ed. (New York: Doubleday Anchor 1954).

⁶ Norbert Wiener, *Cybernetics: or Control and Communication in the Animal and the Machine* (New York: John Wiley, 1948).

pockets of decreasing entropy in a framework in which the large entropy tends to increase" (1954 32).

In the present discussion of the various implications of the term cyborg a helpful clue is provided by the origin of the word, an outcome of a joint venture between the US space program and medical research.⁷ It was used for the first time at a 1960 NASA conference on the modifications that humans had to undergo in order to live in outer space. Manfred Clynes, a world-class pianist and computer specialist, combined the words "cybernetic" and "organism" to come up with "cyborg" in his paper, coauthored with the famous psychiatrist and expert on psychotropic drugs, Nathan Kline.⁸ The two scientists argued that implants and drugs could make possible human existence in space. In its primary conceptualization "[t]he term cyborg refers to a cybernetic organism, a self-regulating human-machine system. It is in effect a human-machine hybrid in which the machine parts become replacements, which are integrated or act as supplements to the organism to enhance the body's power potential."⁹ Initially Clynes and Kline believed that the changes introduced in the organism with the purpose of adaptation and survival in a different environment should be done without changing human nature as such. They have eventually admitted that genetic modification would also be part of such a radical project; however, this would take place in the final stage of the cyborgization of the human.

Obviously their vision was quite dissimilar from the images of the body that have appeared in popular culture readings of the cyborg.¹⁰

⁷ The first to be called a cyborg was a white rat in a US laboratory in the late 1950s.

⁸ Clynes and Kline define the cyborg in their article "Cyborgs and Space", published in *Astronautics* in September 1960: 26-27, 74-75. At the time both of them worked as researchers at Rockland State Hospital, Orangeburg, New York.

⁹ Their definition continues with the following clarification: "What are some of the devices necessary for creating self-regulating man-machine systems? This self-regulation must function without the benefit of consciousness in order to cooperate with the body's own autonomous homeostatic controls. For the exogenously extended organizational complex functioning as an integrated homeostatic system unconsciously, we propose the term "Cyborg" (1960 27).

¹⁰ In an interview Manfred Clynes describes his reaction to the portrayal of cyborgs in science fiction as first one of amusement, then of horror at the distortion of the real scientific concept, which has acquired monstrous dimensions. Chris

In contrast to Clynes' and Kline's notion, and to Wiener's vision of the cybernetic organism as fending off entropy and compensating for malfunctions, in science fiction movies, for example, the cyborg preeminently causes disruption, chaos, death.¹¹ Hence, the main cultural significations of the cyborg as an oppositional figure in dystopian visions of the future have arisen mostly from these popular culture imaginings.

Amongst the cyborg's multiple oppositional articulations is the sociological meaning, with which Donna Haraway has invested this image of the body. Donna Haraway writes her famous *Cyborg Manifesto* in 1985 and since then it has deeply influenced a wide range of critical discussions of the interaction of human and machine in technological culture. Writing from the standpoint of a socialist and feminist, she defines the cyborg as a metaphor for boundary or border in the conceptualization of the central cultural and social roles of humans, in the racial, gender and class definitions of self. The cyborg for her is a political metaphor, containing the potential for liberalization, as well as the threat for being overpowered in the condition of global capitalism's "informatics of domination" (Haraway, 1991 161).

A cyborg is a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction. Social reality is lived social relations, our most important political construction, a world-changing fiction. The international women's movements have constructed 'women's experience', as well as uncovered or discovered this crucial collective object. This experience is a fiction and fact of the most crucial, political kind. Liberation rests on the construction of the consciousness, the imaginative

Gray. "An Interview with Manfred Clynes," ed.et.al. Chris Hables Gray (New York: Routledge, 1995) 47.

¹¹ The cyborg owes its notoriety mainly to the following movies from the 1980s onwards: *Blade Runner*, Ridley Scott (dir) USA, 1982; *Robocop*, Paul Verhoeven (dir), USA, 1987; *Total Recall*, P. Verhoeven (dir), USA, 1990. *Terminator* (1984), *Terminator 2: Judgement Day* (1991), *Terminator 3: Rise of the Machines* (2003) James Cameron (dir), USA, *The Matrix* (1999); *Matrix Reloaded* (2003); *Matrix Revolutions* (2003), Andy & Larry Wachowski (dir), USA.

apprehension, of oppression, and so of possibility. The cyborg is a matter of fiction and lived experience that changes what counts as women's experience in the late twentieth century. This is a struggle over life and death, but the boundary between science fiction and social reality is an optical illusion.

(Haraway, 1991 149)

Haraway explores the metaphor of the cyborg in order to reveal also how the myth of the organic unity of the subject is discredited. She demonstrates how technological practices have been continuously disrupting the Western ontological dualisms: self/other, mind/body, culture/nature, male/female, civilized/primitive, reality/appearance, whole/part, creator/artefact, truth/illusion, total/partial, God/man. Haraway sees the cyborg as a way of resisting binary oppositions, because of the cyborg's hybridity, boundary-blurring status as neither/both human and machine. For her the cyborg encompasses three areas of boundary breakdowns: between human and animal, organic and machinic, physical and non-physical. She offers a new way of seeing cyborgs as a way of recasting these binary oppositions.

A cyborg body is not innocent; it was not born in a garden; it does not seek unitary identity and so generate antagonistic dualisms without end (or until the world ends); it takes irony for granted. One is too few, and two is only one possibility. Intense pleasure in skill, machine skill, ceases to be a sin, but an aspect of embodiment. The machine is not an *it* to be animated, worshipped, and dominated. The machine is us, our processes, an aspect of our embodiment. We can be responsible for machines; *they* do not dominate or threaten us. We are responsible for boundaries; we are they.

(1991 180, emphasis in the original)

For Haraway the cyborg is a kind of historically defined perspective on the body, and a constructionist one, in the same way in which the body has been constructed previously by

scientific (biological, for example) discourses and social (including biomedical) practices. Haraway suggests a typology of cyborgs, where she recognizes two basic types: the organic one – between animal and human; and the technological – between human and machine.

Linguistically and materially a hybrid of cybernetic device and organism, a cyborg is a science fiction chimera from the 1950s and after; but a cyborg is also a powerful social and scientific reality in the same historical period. Like any important technology, a cyborg is simultaneously a myth and a tool, a representation and an instrument, a frozen moment and a motor of social and imaginative reality. A cyborg exists when two kinds of boundaries are simultaneously problematic: 1) that between animals (or other organisms) and humans, and 2) that between self-controlled, self-governing machines (automatons) and organisms, especially humans (models of autonomy). The cyborg is a figure born of the interface of automation and autonomy.

(1989 139)

In her essay “The Biopolitics of Postmodern Bodies: Determinations of Self in Immune System Discourse” (1999) Haraway suggests the three contradictory views through which *the cyborg is culturally interpreted*. Firstly, from a techno-romantic perspective the cyborg symbolizes the attainable cybernetic vision of mythic freedom. The fusion with the machine offers a channel for transcending reality. This cyborg is an ascending angel that leads a life of escapism and is completely detached from ideological, social and political life.

Secondly, the blending of machine and body is usually presented, visualized and interpreted as monstrous, dangerous, aggressive and fearsome, as it embodies techno-paranoid anxiety, which has accompanied the advent of each innovation in human history, be it mechanical, electrical or digital. In Frankensteinian terms the creation is engaged in a lethal battle with its creator and often ends up overpowering or destroying its “father.”

Thirdly, the cyborg for Haraway is a political and social figuration, preeminently a figure of opposition and resistance to power. By characterizing cyborgs as “floating signifiers”, she refers to their multiple significations: “The ubiquity and invisibility of cyborgs is precisely why these sunshine-belt machines are so deadly. They are as hard to see politically as materially. They are about consciousness – or its simulation. They are floating signifiers...” (1991 153).

Haraway’s manifesto links the cyborg to issues of power and agency. As an ideological construct, the cyborg image is loaded with connotations from biopolitics, i.e. the understanding that technological innovations are used for the control and surveillance of the human body. Anne Balsamo points out that part of the “cultural apparatus of body surveillance” includes “self-conscious self-surveillance” – an obsession with knowing your body brought about by the intense visualization of the outer body through consumerist practices, and the inner body through medico-technological ones (1995 216).

After Haraway the literature featuring cyborgs, on and about cyborgs has proliferated, as have the diverse manifestations of this constructed entity. The cyborg, as a creature both of social reality and of fiction, can be vested with the possibilities for domination, enslavement, subjugation, on the one hand, and on the other, with the possibility of freedom. Since the cyborg appears first in cyberpunk discourses, I continue with the discussion of the main features of this subgenre of American science fiction.

2. Cyberpunk

Cyberpunk literature¹² represents an avant-garde, rebellious movement within science fiction, which constructs dystopian visions of the future by focusing on an array of technological

¹² Different labels have been suggested for this subgenre of science fiction, for example “punk science fiction” or “techno-punk” alongside with “Mirrorshade Writers,” “Neuromantics” or simply “The Movement.” See Michael Swanwick, “Viewpoint: A User’s Guide to the Postmoderns,” *Science Fiction Magazine* 10.8 (1986): 22–53.

innovations, their use and abuse by dehumanized exploitative mega-corporations. The futuristic imaginings of cyberpunk focus on the portrayal of cyberspace and a variety of posthuman entities and subjectivities as humans interact and merge with technology in the form of information or sentient beings.

There are two major collections of cyberpunk fiction which helped define the genre: Bruce Sterling's *Mirrorshades: A Cyberpunk Anthology* (1986) and *Storming the Reality Studio* (1991) edited by Larry McCaffery. The prefaces to both books have served as manifestos of the movement.¹³ Drawing on the drug and the punk counterculture movements of the 1960s and 70s, cyberpunk examines the possible implementation of new technologies by individuals who are anti-establishment and are keen on experimental lifestyles, such as the hackers. The post-World War II, postmodern, post-industrial cultural background in the US spawned the movement, which came into prominence in the 1980s, by combining high tech with low life, scientific knowledge with new aestheticism.¹⁴ The word was employed to describe the work of several writers, most notably, William Gibson, Bruce Sterling, Pat Cadigan, Lewis Shiner and Greg Bear.

¹³ For an extensive examination of the cultural and literary background of cyberpunk, see Kevin McCarron, "Corpses, Animals, Machines and Mannequins: The Body and Cyberpunk," eds. M. Featherstone & Roger Burrows, 1995; Sabine Heuser, *Virtual Geographies. Cyberpunk at the Intersection of the Postmodern and Science Fiction* (Amsterdam, New York: Rodopi, 2003) 1- 40. 15 Jan. 2006 <<http://www.ingentaconnect.com/content/rodopi/pms/>>; Chapter 1 of Tatiani Rapatzikou, *Gothic Motif in the Fiction of William Gibson*. (Amsterdam, New York: Rodopi, 2004). 15 Jan. 2006 <<http://www.ingentaconnect.com/content/rodopi/pms/2004>>

¹⁴ The literature on William Gibson is profuse and still growing in the context of the current theoretical interest in cyberspace and embodiment. Seminal works on his early 1980s novels, which gave the impetus to the movement, are David Kellner's "Mapping the Present from the Future: From Baudrillard to Cyberpunk," *Media Culture* (London: Routledge, 1995) 297-330; Brian McHale's "POSTcyberMODERNpunkISM," *Constructing Postmodernism* (London: Routledge, 1992) 225-267; Istvan Csicsery-Ronay's "Cyberpunk and Neuromanticism" ed. L. McCaffery (Durham, NC: Duke UP, 1991). 183-193. The word itself was first used by Bruce Bethke in his short story "Cyberpunk", published in the November 1983 issue of *Amazing Stories* and popularized by an article in the *Washington Post* (30 December 1984).

Historians of the cyberpunk movement often stress that there is a strong cultural correlation between cyberpunk literature and postmodern modes of cultural production, which they discover more specifically in the forced signification, in the breakdown of boundaries and binary oppositions, in the playful use of old forms and meanings, and in their reflection of the modifications in human ontology.¹⁵ Larry McCaffery notes the “cyberpunk’s postmodernist spirit of free play (jouissance) and collaboration, its delight in creating cut-ups and collages (à la Burroughs) in which familiar objects and motifs are placed in startling, unfamiliar contexts” (1991 15). He locates the rise of cyberpunk in “[the] postmodern desert inhabited by people who are, in effect, consuming *themselves* in the form of images and abstractions through which their desires, sense of identity, and memories are replicated and sold back to them as products” (6, emphasis in the original). In discussing the recursive relation between cyberpunk and postmodern social and cultural theory, Douglas Kellner claims that:

[C]yberpunk science fiction can be read as a sort of social theory, while Baudrillard’s futuristic postmodern social theory can be read in turn as science fiction. This optic also suggests a deconstruction of sharp oppositions between literature and social theory, showing that much social theory contains a narrative and vision of the present and future, and that certain types of literature provide cogent mappings of the contemporary environment and, in the case of cyberpunk, of future trends.

(1995 327)

It is important to mention that the writers of cyberpunk were themselves steeped in the technoculture of the times, i.e. video games, cameras, scanners and fax-machines. The editor of *Mirrorshades: The Cyberpunk Anthology*, Bruce Sterling, notes the following important characteristics of the cyberpunk writer: “The cyberpunks are perhaps the first SF generation to grow up

¹⁵ See for example Part 4 of Brian McHale, *Constructing Postmodernism* (London: Routledge, 1992).

not only with the literary tradition of science fiction but in a truly science-fictional world. For them the techniques of classical “hard SF” – extrapolation, technological literacy – are not just literary tools but an aid of daily life. They are a means to understanding and highly valued” (Introduction ix). In addition Sterling stresses how technology, which normally served the governmental, military and corporate domains, penetrated street life, and so brought about “[t]he overlapping of worlds that were formerly separate: the realm of high tech and the modern pop underground” (ix).

These writers shared “punk sensibilities” (McCaffery 205) and were “paradoxically nonconformist” (McCaffery 13). The “punk” in the label cyberpunk refers simultaneously to a musical style,¹⁶ a fashion, a youth subculture and a particular attitude. The latter is most important for understanding the thematic preoccupations and the emotional reactions of cyberpunk literature. As punk music emulated to a certain degree early rock ‘n’ roll anger, loud noise and the desire to shock, it also developed a new aesthetic by attacking the established signs of American beauty and success. Lance Olsen sums up the various strains incorporated in the cyberpunk literary and cultural phenomenon: “The very name ‘cyberpunk’ fuses and confuses the techno-sphere of cybernetics, cybernauts, and, most of all, computer hacking, with the countercultural socio-sphere of punk, the embodiment of anarchic violence, fringe mentality, and a sincere (even naive) attempt to return to the raw roots of rock ‘n’ roll (1994).”

In attitude and style cyberpunk reiterates the punk’s mistrust towards the establishment by describing an ugly urban space littered by junk and dominated by chaos. Cyberpunk stages a rebellion against progressive humanist science fiction with its faith in smooth technological improvement and human perfectability. Cyberpunks portrayed the sense of loss, the desire to escape, the denaturalization of humans, and the reverse process of machines receiving organic attributes, as a way of challenging and differentiating themselves from previous mainstream science fiction writers, who envisage

¹⁶ ‘Punk’ describes a musical style that appeared around 1974-76 and is associated with British punk rock groups, specifically “Sex Pistols” and “The Clash,” and the US “Ramones.” “No Future” was the slogan of “Sex Pistols” and practically sums up the anarchic, angry and nihilistic attitude of this subcultural movement.

bright, ordered futures. Pat Cadigan remarks in this context that “[c]yberpunk was really a reaction against old boy sci-fi which was about white guys in space who would come up with some kind of technological thing.”¹⁷

As the literary predecessors of cyberpunk works have been examined in detail by critics,¹⁸ I find it more important to dwell on the pervasive themes of the cyberpunk movement and then to focus on how they have been treated by Cadigan. These writers posit that having been destroyed, the ecological systems will be supplanted by technological constructs and that in a post-apocalyptic, not-too-distant future the human will be transformed into a posthuman. Usually the destruction of the ecological system is a result of global warfare or a natural disaster following the late capitalist production methods. In most cyberpunk texts, for example in Gibson’s cyberspace trilogy (*Neuromancer*, *Count Zero* and *Mona Lisa Overdrive*), and in Pat Cadigan’s three major novels of the genre, the main conflict has to do with the struggle of an oppositional group of individuals working on the margins of the law (the hackers usually) against powerful transnational corporations or authoritarian military organizations over the misuse of a particular technological innovation.

Turning Donna Haraway’s observation of the “the translation of the world into a problem of coding” (1991 23) into a thematic concern, these writers examine how bodies and minds are reduced to an information flow, how they become universalized. Bruce Sterling notes: “Certain central themes spring up repeatedly in cyberpunk. The theme of body invasion: prosthetic limbs, implanted circuitry, cosmetic surgery, genetic alteration [...] mind invasion: brain computer interfaces, artificial intelligence, neurochemistry-technique radically redefining the nature of humanity, the nature of

¹⁷ Pat Cadigan, Online interview “How Cyberpunk Influenced Technology,” *The Register* 12 March 2001. 17 June 2003 <http://www.theregister.co.uk/2001/03/12/how_cyberpunk_lit_influenced_technology/>

¹⁸ See for example the chapters: Brian McHale, “POSTcyberMODERNpunkISM” and “Towards a Poetics of Cyberpunk,” *Constructing Postmodernism* (London: Routledge, 1992) 225-268. Mary Shelley, William Burroughs, Kathy Acker, Thomas Pynchon, Philip Dick are among the predecessors.

the self" (xi). In cyberpunk novels the body is portrayed typically as an encumbrance, preventing the mind as pure substance to float in the heavenly realms of cyberspace. These novels consistently reaffirm the Cartesian split of body and mind, and reiterate the Puritanical dismissal of the body.

Cyberspace is envisaged as the new mythological, romanticized place of bodily transcendence and escape. Religious imaginings add another intriguing dimension to the legendary proportions that cyberspace has gained. Michael Benedikt and John Perry Barlow have both spoken of the absolute freedom in cyberspace – a place which is classless, raceless and genderless, even bodiless.¹⁹ Thus, cyberspace evolves into a higher reality, beyond the "conceptual hallucination" metaphor, not only a product of the mind; it is transformed into a spiritual space. *Cyberspace becomes a religious realm* and as such is examined by the new field of "technosis" – the term appears in Erik Davis' book of the same title²⁰ – linking digital technology to old arcane spiritual ideas. Margaret Wertheim's *The Pearly Gates of Cyberspace* (1999) also emphasizes the uncertain nature of cyberspace, that it is "not ontologically rooted in the physical phenomenon" and is "*not subject to the laws of physics*" (228, emphasis in the original). She concludes that "this new digital domain is seen as an attempt to realize a technological substitute for the Christian space of Heaven" (19). She examines cyberspace as the New Jerusalem, the new soul space, appearing in opposition to the all-pervasive reality of matter, especially in the context of the burgeoning interest in psychic phenomena in the U.S. Wertheim claims:

As is now evident by the tremendous spiritual yearnings we see around us today, many people in the modern West –

¹⁹ See M. Benedikt, ed., *Cyberspace: First Steps* (Cambridge, Mass: MIT Press, 1991) and John Perry Barlow's "A Declaration of the Independence of Cyberspace" 1996. 23 Jan. 1999 <w2.eff.org/~barlow/Declaration-Final.html> Barlow, who was the lyricist of the band "The Grateful Dead," founded in 1990 the Electronic Frontier Foundation, a San Francisco-based political and legal action group dedicated to the preservation and extension of liberty in cyberspace.

²⁰ Erik Davis, *Techgnosis: Magic, Memory, and the Angels of Information* (London: Serpent's Tail, 1993).

especially in America – are not content with a strictly materialist view. In this climate I suggest that the emergence of a new kind of *nonphysical space* was almost guaranteed to attract “spiritual” and even “heavenly” dreams.

(40, emphasis added)

Cadigan portrays this urge to overcome the body in her novel, presumably a sublime feeling accompanying the human transmigration into cyberspace.

Cyberpunk fiction, though envisaging the future, provides a scathing commentary on the present and is a social and cultural criticism of late capitalism.²¹ As Fredric Jameson observes: “Science fiction can occasionally be looked at as a way of breaking through to history in a new way,” as it provides “a distinctive historical consciousness by way of the future rather than the past” and is significantly “conscious of our present as the past of some unexpected future, rather than as the future of a heroic national past” (1988 18).

Science fiction, and cyberpunk as its offshoot, is a literature of ideas, which embraces serious philosophical contemplations and reveals a tendency towards moralizing. I agree with Rosi Braidotti that “science fiction enacts a displacement of our world-view away from the human epicenter and that it manages to establish a continuum with the animal, mineral, vegetable, extra-terrestrial and technological worlds. It points to post-humanist, biocentred egalitarianism” (2002 183). Cyberpunk not just supplies the readers with dystopian scenarios for the future, but reflects upon our alienation, confusion, unease and disbelief at the changes taking place at such a fast pace at the present moment. Baudrillard also affirms that science fiction is “no longer an elsewhere, it is an everywhere” (1991 312). Similarly Haraway finds that “the boundary between science fiction and social reality is an optical illusion” (1991 149).

Therefore, cyberpunk as part of popular fiction illustrates the function of images in the double process of shaping and reflecting

²¹ Frederic Jameson. *Postmodernism or the Cultural Logic of Late Capitalism* (London: Verso, 1991) 419n.

cultural perceptions. In this line of thought, Elaine Graham argues that “science and technology participate in building worlds of meaning as much as they are responsible for constructing cathedrals, canals and computers. Both technoscience and popular culture – literature, television and film – are influential generators of significant representations of the nature of human identity and technological futures” (26). Cyberpunk works reflect the poststructuralist transformation of bodies and the accompanying metamorphosis of selves as fluid, multiple, fragmented and dispersed subjectivities. The significance of the genre is that it makes the reader contemplate the shifting relationship between technological innovation and social change, by interrogating embodiment through a pluriformity of images of the body.

In my view the argument of Kroker and Kroker concerning the disappearing postmodern body, which is invaded by language, the media, and institutions of power, medicine, technology, and fashion best articulates the drive towards disembodiment of cyberpunk fiction, and of the male characters in Cadigan’s *Synners*, in particular.

No longer the Cartesian thinking subject, however, but a fractal subjectivity in an ultramodern culture where panic science is the language of power: no longer ratiocination to excess, but parallel processing as the epistemological form of postmodern consciousness [...] no longer the geometrically-focused and self-regulating body, but technologies of the body immune as key features of a libidinal economy that produces toxic bodies and designer aesthetics as its necessity of operation; and no longer univocal (grounded) perspective, but the fatal implosion of perspective into the cyberspace of virtual technology.

(1987 181)

As the above quotation implies, the cyborg’s hybridity helps subvert any understanding of identity as fixed, and this is precisely the meaning I impart to it in the discussion of subjectivity.

Being part of the cyberpunk movement, Pat Cadigan certainly shares most of the characteristics in themes and attitude outlined

thus far. She is one of the few women writers to be recognized as part of the movement. She acknowledges: "I sense really, in retrospect, that there was a lot of sexism (inherent in the cyberpunk movement). I was the only woman in *Mirrorshades* (probably the definitive cyberpunk anthology), and I was the only woman to be mentioned in that group of writers. Some people thought of that as tokenism; other people didn't know that Pat Cadigan was a woman; and other people completely ignored me and left my name off everything" (2002). This is probably one reason why her work has received scant critical attention in comparison with the male cyberpunks.

Since their publication, her novels have been analyzed predominantly from a feminist perspective.²² While I incorporate this view in my analysis, I do not discuss Cadigan only as a technofeminist, as is often done in the critical literature, but rather as a writer who has an important contribution to the current debate on embodiment and subjectivity.

She has published three novels that belong to the cyberpunk genre: *Mindplayers* (1987), *Synners* (1991), and *Fools* (1992), where she explores the implications of the emerging virtual reality on the formation of self. She has written and continues to write short stories, which are anthologized,²³ as well as to act as editor of cyberpunk anthologies.²⁴ *Synners*, which won the Arthur C. Clarke award, incorporates the cyberspace and punk-rock ideas in an original way. Cadigan offers various manifestations of the fusion between the human and technology, portraying different images of

²² See the articles by Anne Balsamo I use in the discussion here, as well as Laura Chernaik, "Pat Cadigan's *Synners*: Defining Nature, Science and Technology" *Feminist Review: Debating Discourses, Practising Feminisms*, 56 (Summer 1997), 61-84. This text draws on the political discourses of feminist and queer theories to show how Cadigan deconstructs the Christian tropes to argue for a responsible approach to technology. Shawn Wilbur "'Cyberpunks' to *Synners*: Towards a Feminist Posthumanism," *The Cyberpunk Project* 1995. 22 Mar. 2003 <http://project.cyberpunk.ru/idb/cyberpunks_to_synners.html> compares *Synners* and *Neuromancer* from a gender perspective and finds Cadigan's novel to be a feminist response to Gibson's works.

²³ Ian Whates, ed., *Myth-understandings* (NewCon Press, March 2008).

²⁴ Pat Cadigan, ed., *The Ultimate Cyberpunk* (New York: Pocket/iBooks) 2002.

the body. In Cadigan's futuristic vision technology and the human are not envisioned in contiguous, but rather in oppositional terms. As is usually the case with cyberpunk writers, the predominating motifs in bodily experience for her characters are the ones of physical pain and decay. However, A. Balsamo points out that *Synners* "explicitly discusses an often-repressed dimension of the information age: the material identity of the techno-body" (1995 220). This is how Cadigan explains her own approach:

When I was writing *Synners* I realized that I was delineating two different types of people. One type, like Visual Mark, wanted to crawl into Virtual Reality and have the door shut behind him. The other, like Gina, wanted to climb out and pull it all out with her. Display it outside. So there are the inner-directed and the outer-directed. What I wanted to show in *Synners* was that in some cases cyberspace, or whatever you choose to call this technology, will bring people together and in other cases it will divide them, it will isolate people. Again, it always depends on how it is used. It is only as good as the person or people using it.

(1996)

By focusing on the desire and promise for disembodiment and by making it contingent on human agency and will, Cadigan partakes of the usual cyberpunk representation of transcendence of the body. In *Synners*, just as in *Neuromancer*, the action revolves around human-machine relations in an urban wasteland dominated by corporate interests and alienating technologies. The male characters are experts in technology, but insecure in personal matters, for they feel more at home in cyberspace; the female characters are confident and stronger; an artificial intelligence is created as if accidentally and comes to serve as the principal power. However, in her treatment of potential disembodiment Cadigan's novel stands in stark contrast to William Gibson's approach, accepted as emblematic of the genre. To the characters in his widely acclaimed cyberpunk trilogy, the body seems an "accident," consequently they are driven by the urge to get rid of "the bonds of polycarbon and

hated flesh” (1984 164). This is how Gibson describes the feelings of his central male character – the hacker who can no longer be in cyberspace, because his ability to do so has been destroyed by toxic drugs, administered to him for stealing: “For Case, who’d lived for *the bodiless exultation of cyberspace*, it was the Fall. In the bars he’d frequented as a cowboy hotshot, the elite stance involved a certain *relaxed contempt for the flesh*. *The body was meat*. Case fell into the prison of his own flesh” (1984 12, emphasis added). In her treatment of embodiment in cyberspace Cadigan departs from the cyberpunk formula and it is on this idiosyncrasy of her writing that I would like to focus.

3. The Textual Body

The novel examines the interrelation between cyberspace, Virtual Reality, rock music, the production of music videos, advertisements, and computer games. In the novel Cadigan remains true to both her cyber and punk affiliations. The mood is dark, the setting is either one of urban chaos and decay, or of the fantastic worlds of VR. The term Virtual Reality (VR), coined by Jaron Lanier, the former head of the VPL Research Inc. in California, is immersive and interactive. It is a computer-generated visual, audible and tactile multi-media experience, which surrounds the body with an artificial sensorium of sight, sound and touch. The creation of this experience depends on the use of technology such as stereo headphones, head-mounted stereo television goggles, computerized clothing: datagloves and datasuits. It is interactive, as the computer reacts to the body movements of the user by reconfiguring the simulated environment. In *Synners* most of the characters have experiences in VR, which are masterfully rendered by Cadigan.

The urban space Cadigan portrays is structurally disordered and accelerating towards entropy. It is Walter Benjamin’s labyrinthine city,²⁵ representing a complex architecture of information, which

²⁵ I am referring here to Walter Benjamin, *The Arcades Project*, trans. Howard Eiland and Kevin McLaughlin. (Cambridge, Mass.: Harvard UP, 2004). It is dedicated to the Paris arcades that so fascinated him. He sees the metropolitan

bombards its citizens on the “dataline”. It consists of imploding communities, a data and media black hole, where citizens are unable to function effectively. The distortion comes from the fluid spatiality and temporality of the novel in the constant oscillation between Real Life and Virtual Reality. Despite the fact that Cadigan offers a distorted vision of the world, the reader can still recognize what is real.

Cadigan departs from conventional science fiction, as the focus in her novel moves from the peculiarities of outer technological space to the idiosyncrasy of the human mind interacting with technology, and the resultant inner struggles, doubts, addictions and neurosis. The tone pervading Cadigan’s fictional world is fatalistic, as is usually the case with cyberpunk writers. In this aspect her novel can be seen as a reworking of American “noir fiction” – the ‘hard-boiled’ crime thriller writers – Dashiell Hammett, Mickey Spillane and Raymond Chandler.²⁶

The chief protagonists in Cadigan’s novels are anti-heroes, many of them hackers, fighting the exploitative system, living rootless lives on the verge of the law. The personal relationships between them are transitory and dysfunctional. They seek solace in synthetic images which are ubiquitous, produced either by hallucinogenic drugs, brain sockets, holograms, and hotsuits that allow them total immersive experiences in VR; they are surrounded everywhere by rolling cameras and multiple television screens offering various forms of pornography: “medporn,” “foodporn,” “disasterporn,” “prisonporn”. Information increases exponentially, saturates reality, which becomes in Lyotard’s terms “inhuman”. One of the hackers describes this state of affairs, which coincides with the current moment of informational deluge in technological culture: “Besides being rich you have to be extra sharp these days to pick up any real

crowd as a mobile labyrinth within the city labyrinth.

²⁶ Critics have often drawn a parallel between the tone and atmosphere in cyberpunk novels and those of “film noir,” as well as the American “roman noir.” These connections are examined at some length in Tatiani Rapatzikou, “Chapter One,” *Gothic Motifs in the Fiction of William Gibson* (Amsterdam, New York: Rodopi, 2004). 2 Sept. 2006 <<http://www.ingentaconnect.com/content/rodopi/pms/2004>>

information. You have to know what you are looking for and you have to know how it's filed. Browsers need not apply. I miss the newspaper" (1991 52-3).

In a world dominated by simulation, musicians, for example, are no longer interested in the writing and performance of music itself, but in the music videos. The making and publicizing of one's own videos can be seen as part of the technological future, for Cadigan's prediction has come to be realized nowadays in open source sites such as "YouTube".²⁷ In the book the videos are three dimensional visualizations, i.e. projections of the musicians' imaginations to the musical accompaniment, in which the audience can also participate. This synthesis of music and image is performed not by any tool, but by the human mind, as memories, associations and imagination become instrumental in generating the videos. The people performing this act are called "synthesizers", which is abbreviated to the homophone "synner" of the title of the novel, giving rise to various interpretations I elaborate on further.

Eye-TraXX is the company that makes such videos. It is acquired by Diversifications, Inc., a corporation, specializing primarily in advertising, alongside with Hall Galen Enterprises, which employs a scientist inventor of brain implants. Diversifications, Inc. uses the production of music videos as a front to introduce the implantation of brain sockets to create a heightened state of virtuality in its users, thus creating a direct human-computer interface.²⁸ The adversaries in the novel are the anonymous "Upstairs team" of Diversifications, which refers to their position of power and control. They are personified in Manuel Rivera, the watchdog of the managers, as well as in the flat evil characters of Galen and the implant surgeon, Dr. Joslin.

Several people, among them Mark, Gina and Gabe, working

²⁷ YouTube is a video-sharing website that was launched in February 2005. The fascination with do-your-own-video is best illustrated by this site. <<http://www.youtube.com/>>

²⁸ As the novel was published in 1991, this might have sounded as science fiction then, but not so today, when medicine turns people literally into cyborgs through cochlear implants or by using brain pacemakers to treat Parkinson's disease, obsessive compulsive disorders or to fight severe depression. The pacemaker is implanted under the collarbone and has electrodes connected to the brain.

for Diversifications, receive the brain sockets, which are mainly used for the synthesizers' more effective exploitation, and thus they are literally transformed into cyborgs. This part of the narrative illustrates best the theme of control and surveillance of individuals by the panoptic corporate power through mind-altering devices. The exploitation of the cyborg characters by Diversifications supplies a meaningful commentary on the surveillance practices made possible by the new technologies that are no longer restricted to the apparatus of governmental and police control. Nowadays surveillance is no longer hierarchical and centralized, but distributed, creating a complex network of power relations, as described by Foucault. Without indicating spaces for internment as in the 19th century, the 21st has indeed become a society of "enclosure" striving for total control, where everybody is simultaneously a subject of the monitoring gaze and an origin of one. The surveillance system becomes a universal one, and the panoptic principle an all-encompassing one, as everybody is allowed various peeping holes in the lives of others; everybody partakes of the panoptic gaze.

In no time the brain sockets render the drug trade obsolete in the fictional world of the novel, as hallucinations and illusions go on to being produced mainly by technological means (228). Once the brain implants are adopted by large numbers of the population, Gina notices that it "hadn't taken long for everything *to change for the machines*. Pretty soon it would all be happening at the speed of thought, before it could actually happen, so that nothing would ever have to happen again. You'd only think things had happened, and if anything ever did happen, you wouldn't know the difference" (228, emphasis added).

However, it soon turns out that the sockets have serious side-effects. These ironically occur first to the brain surgeon, Dr. Joslin, and Galen – "the head-drillers", as Gina refers to them (279) – who die of a stroke while being connected to each other's brains via a computer and sharing each other's dreams, memories and visions. Their death should serve as a warning to all who agree to body augmentation through technology. But few heed the danger. As a virus spreads through the system, it hits the protagonist Mark and kills his body. The stroke he experiences is transmitted

throughout the computer network. It causes power outages, and a total system crash, which brings about the death of all people connected at that moment through their brain implants (347). A group of hackers, including Gina, Gabe and his daughter Sam, who uses nanotechnology as power supply by implanting a chip she has made in her flesh, succeed in combating the virus in the system. In order to do so Sam, Gina and Gabe collectively connect and enter cyberspace in a virtual battle. Meanwhile they share each other's memories, especially the traumatic ones, by becoming lost in the other's visions of the past (419).

In the world engendered by Cadigan's creative imagination, the attitude to technology is ambivalent. It is portrayed as invasive, destructive, however not so out of its own accord, but because of what humans make of it. It acts as an alienating and threatening force for the characters, and is so experienced by the reader. The implants, for instance, were originally developed to compensate for mental disabilities. Once the huge profit from them on the entertainment market was realized, however, they were no longer used for humanitarian purposes. The anxiety born out of the massive invasion of technology in everyday life manifests itself in different forms, such as technological paranoia, the dangers one can encounter when in cyberspace, and the trauma of becoming a disembodied computerized entity after dying. At the end of the novel, it transpires that humans have not learned much from the fatal experience, though they have come so close to an apocalypse. They make no effort to curb and monitor the use of technology, but still continue to abuse it for entertainment, and as a means of escape from reality.

The title provides the key to the readings of the novel. Characters prefer to occupy artificial worlds – holograms, VR worlds, and screen-mediated reality. A telling example for this is one of the episodic characters – Consuela's simulation of an underwater world (126). Using holograms, she can create true-to-life immersive environments that people pay to dive in. The reason they wish to enter this artificial environment, Consuela explains, and "step into whatever world it is they want made for them", is that "the *world's* not big enough. If it were, we needn't to make worlds like this"

(126). The same is true as regards the use and abuse of alcohol and of Lotusland, described as a mildly hallucinogenic beverage.²⁹ In Chapter 19 of *Synners* one of the many parties where people get totally stoned while filming their experiences and reproducing them in copies of simulated life recorded as a reality show is portrayed. Gabe, one of the major male characters, is almost lost in the oscillation between the hologram's synthetic reality that is the centerpiece of the party, the replicated reality on the screens, and his own hallucinations brought about by having one too many of the Lotusland drink (193).

Gabe's addiction to VR turns out to be the strongest. In an attempt to avoid his bossy, estranged, lawyer wife, Gabe seeks refuge in "House of the Headhunters" – a simulation game he has created from the pieces of an old movie thriller. He plays the leading man, while the female characters are "templates [that] had been assembled from two real, living people" (41). This story-world within the story parodies some features of cyberpunk writing, since it clearly reveals male fantasies of domination and gratification, while combining erotic elements with a hard-boiled adventure narrative. Playing the game, Gabe 'feels' how the characters' "simulated metal changed into simulated flesh" (163). But soon he is required by his employer to transform his fantasy game-world into a commercial, which is ironically called "Body Shields". In the end he sells his virtual reality characters to Hollywood to be used in a feature movie. His attitude to technology and artificial reality is instrumental to understanding the urge towards disembodiment.

²⁹ The experience of getting high often recounted in cyberpunk novels is an allusion to the experimentation with psychotropic drugs in the US, especially the CIA-sponsored research on behavior control carried out in the 1950s and 1960s. For more details see Donna Haraway "Cyborgs and Symbionts. Living Together in the New World Order," ed.et.al. Chris Hables Gray (New York: Routledge, 1995) xvi.

4. The Human Body

One of the outstanding features of the novel, which is also conspicuous in relation to Gabe's character, is that it moves seamlessly from the VR produced by technology to the geographical landscape of observed reality. The reader is often at a loss, just as the characters are in their instantaneous transition into artificial reality, where bodies are represented through different images: holograms, cyborgs, machine constructs. Gabe is afraid of the world at large, from which he escapes in his simulation pit. "He'd been running around in simulation for so long, he'd forgotten how to run a real life, real-time routine; he'd forgotten that if he made mistakes, there was no safety-net program to jump in and correct for him" (239). He is in a constant state of confusion, a state that has been referred to as "Alternate World Syndrome (AWS)". AWS lag occurs between the virtual body and the biological body, and is caused by the sequential switching between worlds, with the corresponding conflict of attention (Heim 67). Heim describes his own experience, which he calls body amnesia:

Three hours in the Virtual Dervish, my optic nerves are imprinted with brightly colored structures. After hours of immersion in 360-degree simulation, I can later summon the computer-generated images with the slightest effort – or see them sometimes in unexpected flashes of cyberspace. Hours later, I still felt that a touch of perceptual nausea, a forewarning of the relativity sickness I call Alternate World Syndrome. Everything seems brighter, even slightly illusory. Reality afterwards seems hidden beneath a thin film of appearance.

(67)

The main purpose of inhabiting alternate realities in the novel is to surmount the body. This is achieved in the process of causing direct brain stimulation, inducing sensory and emotional experiences. Cadigan describes this uncanny illusory condition as a synthesis of both waking and dreaming states. The mediated visions

seem “less like a video, more like a waking dream” and “... people should feel more creative” by having been provided a “hardwired out-of-body experience” (67).

The title also suggests the blending of various sensory experiences, where the characters’ trips in VR are presented as synesthetic experiences, described by Cadigan in the following way: “He’d already been Visual Mark by then; it should have been Visualizing Mark. It was as if he had a pipeline to some primal dream spot, where music and image created each other, the pictures suggesting the music, the music generating the pictures, in a synesthetic frenzy” (109).

The most significant interpretation of the title of the novel refers to the synthesis of human and machine. There are three types of synthesis presented in the novel: “synthesizing humans”, “synthesized humans” and the “bastard offspring of both” – artificial intelligence (386-7). The group of “the socket people” (259) – Mark, Gabe and Gina – who are literally transformed into cyborgs by receiving the brain implants, which are supposed to enhance their creative visions, are at once synthesizing and synthesized humans. One of the characters offers the following technical explanation of how these implants function:

[S]ockets feeding into the temporal lobes will enhance whatever data come in. Interactivity again – the consumer can cooperate in the forming of the images. Useful for games of any level of sophistication. It will feel quite extraordinary. Mystical, if you like [...] Manipulation of the parietal lobes [...] will give the illusion of movement. Your people will no longer have to move about physically in hotsuits to produce effects like walking, climbing, and so forth. And the consumers will feel it without needing hotsuits of their own.

(66)

Alongside the title, which suggests the homophone sinner, there is a sustained reference in the novel to original sin, equated to the act of synthesizing. As Gina states in the epilogue “every technology has its original sin [...]. Makes us original synners. And

we still got to live with what we made” (435). There is a mention also of “the fall” and “the pit”. “The pit” refers to the working space – an overlapping of den and cubicle – where the employers of Diversifications are supposed to do their creative work. “The Fall” denotes the filming of a video by Gina, which involves her jumping on a bungee from a high-rise building. The video records her fear and the rush of adrenalin. It is significant that Gina is a s(y)inner, whose fall is interrupted and reversed. It refers metaphorically to her dubious position as human/cyborg, for even though she has implants, unlike Mark she does not strive towards disembodiment.

Through the ironic and often subversive usage of religious imagery the book actually foregrounds the affinity between Christian theology and posthuman imaginings. The technological sublime that marks the transhuman visions of the Extropians among the other radical posthumanists discussed in Chapter 1 is echoed by the character of Visual Mark. For him cyberspace is some heavenly realm where he as a posthuman can achieve transcendence and approach divinity. Gina also feels this material other-worldliness of cyberspace when she has to make the choice whether to remain there, where no pain and suffering exist and she can be close to the disembodied Mark, whom she loves, or return back to Real Life and Gabe. She chooses the second option and so the posthuman who achieves disembodiment in Pat Cadigan’s novel is gendered only as male.

Becoming a “synner” or synthesizer in the novel also involves “*changing for the machines*”. The expression initially appears in its literal meaning uttered by Gabe, who encounters Mark in front of the coffee machine and says to him: “I thought you looked like you needed, um, change for the machines” (97). Gabe refers to the coins required to operate the vending machine in front of them. However, Mark is about to become a candidate for one of the new implants, so he is facing imminent physical change in his body. Mark is the original “synner,” for he is the one who enthusiastically transgresses the boundary between human and machine,³⁰ and feels transcendence to be a truly sublime experience.

³⁰ The same idea that people have to change for the machines is repeated as an echo throughout the novel. See for example 245-6, 253, 283, 298.

Being an outstanding musician with a powerful imagination that produces effective images, Mark is hired by Diversifications. He is the guinea pig for the new technology of socket implants, and he has the greatest propensity among the characters to use them. A human synthesizer, nearing the age of fifty, Mark is the first to experience the liberating effect of the new technology, by expanding his knowledge and upgrading his self-awareness. As Gina says, "[if] a synner was someone who continually hallucinated, then Mark was the original" (109). At one point Mark acknowledges that he is just the medium through which the pictures run (87), and as Gina observes, he is incapable of living in the real world (232). Visual Mark is similar to Gibson's male antiheroes, especially Case in *Neuromancer*, who draws a parallel between the computer matrix and proteins linking to form cells. Case imagines "data made flesh," which metaphorically accords a secondary place to physicality, and the primary one to incarnate data. Through Mark, Cadigan offers the view of the body as prosthesis, which is considered to be fundamentally scatological and ultimately disposable.

A transmigration of the mind takes place, as Mark's consciousness and the self are transferred in cyberspace, where the myth of eternal life is fulfilled. This is a reverberation of the hard-core posthumanism of Moravec, who opposes the idea that identity resides in a body, and suggests the concept of pattern-identity, which "conversely, defines the essence of a person, say myself, as the pattern and the process going on in my head and body, not the machinery supporting that process. If the process is preserved, I am preserved. The rest is mere jelly" (1988 17). The Real Life scientist, Moravec, envisions transcending the body just like the fictional character Visual Mark. He imagines the possible scenario of downloading human consciousness into a computer, thus anthropomorphizing the machine. As long as the pattern of one's identity is transferred, one can attain immortality.

This is precisely Mark's line of thought on having a stroke, whereby his body dies, but his mind is transferred in cyberspace: "Poor meat. Nobody cared. Not even me" (299). He later relates the experience of existing as a disembodied mind: "He was already accustomed to the idea of having multiple awarenesses and a single

concentrated core that were both the essence of self" (325). The experience of entering cyberspace fulfills his life-long dream of overcoming the limitations of corporeality: "He knew the time was coming when he would try to slip back into the meat-jail and find out it was too small for him. Once he had been sure his brain held a rabbit hole, a pocket of infinity where no limits applied, no boundary conditions were enforced, and he could fly through the universe if he wanted to" (233). This, however, is accompanied by the fear that: "perhaps enlarging himself that much would dissipate him, fragment him into many little aspects... Perhaps then he would lose his memory and forget that he had been human once" (326).

However, the detrimental effects of the brain sockets prove to be quite grave. His contempt for the flesh exacts a price: his body succumbs to a viral attack which ends in a stroke. As Marks's consciousness is unleashed in cyberspace, he merges with the artificial intelligence Art Fish, and thus consolidates its power. Then the shockwave of his stroke spreads throughout the net and almost annihilates it, as well as many people who have already received the new implants. Thus Cadigan insists on the reciprocal relationship between human and technology. The very fact that the stroke he experiences is transformed into a deadly virus that causes the network to crash makes the reader consider the effect of disembodiment on technology – a reversal of the usual theme. In addition, as Deborah Lupton has argued: "popular and technical representations of computer viruses draw on discourses that assume that computers themselves are humanoid and embodied and therefore subject to illness spread by viruses" (99).

The traditional notion of character is further deconstructed in this novel as the boundary between human and machine becomes fuzzy. Mark has a bimodal identity – socially constructed, through the interaction with technology, and after becoming disembodied – a pure consciousness out there in cyberspace. Within the realm of ordinary embodiment he often feels pain, but once he transcends physicality, he enters the infinity of cyberspace as a new spiritual dimension of harmony and bliss.

Gina is Mark's long-time girlfriend, who stands in contrast to him as being earthly, strong, sexually driven, a marked physical presence

to his yearning towards bodily absence. A sinner and a cyborg too, she is Mark's counterpart. This is revealed clearly in the scene where they communicate with each other after having undergone the implantation: "The pov [point of view] was excruciatingly slow as it moved across Mark's face to her own, lingering on the texture of her dreadlocks next to his pale, drawn flesh, finally moving on to the contrast of her deep brown skin" (216). Her body is marked as different from Mark's by her skin color, described as "wild forest hardwood", and her dreadlocks. The significance of embodiment comes to the fore in the description of Gina's character, through her sexual encounters with Mark and Gabe, through physical pain, her passion and anger. Not only is she physically and psychologically different from the alienated Mark, who longs to step out of this world, but she also helps Gabe to reevaluate embodiment. He initially represses his body technologically with his adventures in VR games, and willingly becomes a cyborg by having the brain sockets implanted. It is only through his relationship with Gina, that he learns to feel his body and it is restored to him.

It is in Gina's character that the reader most clearly recognizes the correlation between body and subjectivity. In the climactic scene of the book, where the struggle between the humans and the virus is staged in cyberspace, Gina has to make the crucial decision whether to renounce her body and join Mark or whether to return to the real world. It is at this point that Gina refuses to become disembodied and to remain with what is left of Mark. It is important that in this crucial fight each character returns to memories that are most significant for him/her and actually help define the self. A unifying feature of all Cadigan's cyberpunk novels, according to Sanine Heuser, is that the characters' identity is determined by their memories and that identity resides with(in) the body:

In *Mindplayers*, *Synners*, and *Fools*, personalities are "franchised" (i.e., treated like software or computer programs). But the liberal interchange, overlay, or erasure of memories and personalities is never without problems, because each character's notion of identity relies not only on the sum of its memories but also on its body. In these

critical situations, the body often calls attention to itself. It is then perceived as alien or unfitting for the memories that it carries of itself. Sometimes it is even changed, the better to contain these particular memories.

(Heuser 20)

So in the end Gina is reunited with Gabe. They retire from the world, having threatened the notion of self and body through their posthuman experience, preferring isolation to the temptations and hazards of the technological age.

The popular image of the cyborg is typically portrayed as a hyper-masculine killing machine, artificially enhanced in the extreme form of a steely, militaristic entity. Cadigan's male cyborgs depart radically from this stereotype; they are physically weak and suffer from an existential angst. The significance of the real, enacting body even in transactions with technology is emphasized by Cadigan and is best illustrated by the gendered, female body in *Synners*. It is the women in the book that are in touch with their bodies in a way that is constructive, life-assertive and consolidating. The cyborgs that are positively marked for Cadigan are her female characters and in my view this is so precisely because they do not reject embodiment. Cadigan does not achieve the positive treatment of her female characters in a stereotypical manner by depicting women in the roles of mothers and caretakers, but mostly by exploring their constructive interrelation with technology. Even when the women characters are interfacing with it or receiving it within their bodies, they remain 'earthly', resolutely committed to physicality and materiality.

One such example is Sam, Gabe's daughter, who is also a cyborg, but with a difference. She is a hacker committed to salvaging what little is left of the world's human resources. This is how she describes hacking: "if you couldn't walk on the floor, you walked on the ceiling. If you couldn't walk on the ceiling, you walked on the walls, and if you couldn't walk *on* the walls, you walked *in* them, encrypted. Pure hacking" (1991 351). As a hacker, Sam is a liminal figure, who has assumed an oppositional role. But her aim is not escape from reality; it is to change it for the better. In her case it

is not brain sockets that she has implanted. She receives technology within her body, but only so as to do work, to labor, and this never leads her to question the (im)possibility of disembodiment. For Anne Balsamo, "the two female hackers actively manipulate the dimensions of cybernetic space in order to communicate with other people. Gabe and Visual Mark, on the other hand, are addicted to cyberspace for the release it offers from the loneliness of their material bodies" (2002 228). For Cadigan it is only the male body that is repressed as Kroker and Kroker hypothesize in their theory of the disappearing postmodern body:

Panic bodies living on (their own) borrowed power; violent and alternating scenes of surplus energy and perfect inertness; existing psychologically on the edge of fantasy and psychosis, floating sign-systems of the body reexperienced in the form of its own second-order simulacra; a combinatorial hyper-exteriorization (of body organs) and hyper-interiorization (of designer subjectivities) and incited less by the languages of accumulation than fascinating, because catastrophic, signs of self-extermism, self-liquidation, and self-cancellation. Panic bodies, an inscribed surface onto which are projected all the grisly symptoms of culture burnout as the high five-sign of the late 1980s.

(1987 22)

Cadigan depicts the male character as the inner-directed, self-liquidating possessor of a panic body, perceived not as self, but as a disposable object. Balsamo believes that these "masculinist dreams of body transcendence [...] signal a desire to return to the 'neutrality' of the body, to be rid of the culturally marked body" (2002 233). Still, she argues that "although the body may disappear representationally in the virtual worlds of cyberspace and, indeed, we may go to great lengths to repress it and erase its referential traces, it does not disappear materially in the interface with the VR apparatus, or in its engagement with other high-tech communication systems" (229). Through her male and female characters Cadigan insists that the body is material; that this material body is gendered,

and what is more, it is the female body that is expressly represented as laboring (233).

By referring to the four central characters in the novel – Mark, Gabe, Gina and Sam – Balsamo sets out to “annotate a taxonomy of the ways in which the techno-body is constructed in contemporary culture” (218). She specifically stresses the “dual natures of the body,” for it is at once a constructed discursive entity and a materialist object, embodying the markers of cultural identity (219). This approach illustrates the postmodern and feminist perspectives on the body already discussed in Chapter 1. Balsamo discovers four different versions of postmodern embodiment in Cadigan’s novel, which I have already discussed and which she summarizes in the following order (1995 220):

Sam (the body that labors)	Gina (the marked body)
Gabe (the repressed body)	Visual Mark (the disappearing body)

In Balsamo’s interpretation of Cadigan’s characters, the male symbolizes addiction and isolation, and stands in stark contrast to the female, who implies labor and communication. A useful framework for examining the role and significance of these characters, in my view, is to see them in opposition, whereby certain bodies are marked, others unmarked. Thus the male stands versus the female, human versus machine, normative versus deviant. For instance, the name of Visual Mark indicates metaphorically this polarity. His name is ironic through word play for he actually becomes invisible by transcending physicality, and getting lost in cyberspace. Meanwhile, he also leaves a mark, by causing a break in the system and by merging with an Artificial Intelligence. In the context of the opposition I outlined in Chapter One, Mark’s and Gabe’s bodies become the “represented” ones. The female bodies signify the “enacting” bodies and remain so till the end. The unmarked body is typically the one of the rational self of man, of the coherent subject, while the marked body is its symbolic Other: the organically marked

body of the woman, and the technologically marked one of the cyborg. However, in the novel the roles are reversed; it is the women that are rational, laboring and preserve their bodies and integrity. The primary marked body in the book remains that of the cyborg – a product of the miscegenation between human and machine. Balsamo reminds us that “[i]n terms of identity, therefore, Haraway speaks of the cyborg of her imaginings as female” (2002 207).

What is most relevant to the present argument is the emphasis on the materiality of the body that pervades Cadigan's novel and Balsamo's analysis of it. “*Synners*”, writes Balsamo, “reasserts gender and race as defining elements of posthuman identity so that as *Synners* discursively represents different forms of technological embodiment, it also reasserts the critical importance of bodies in any analysis of the information age” (228).

For the sake of analysis it is necessary to include one more ‘synthetic’ character – that of the Artificial Intelligence. This AI originates from a virus named Dr. Fish. The virus first emerges from a computer containing Dr. Fish's answering machine, where the accumulated information has become so dense that it finally collapses. Catastrophe theory explains Dr. Fish's emergence as a conscious entity, since “going over the brink of catastrophe was the first stage. The second was recovery – since it was programmed to accommodate” (174). Its appearance is initially presented with humor, because it only seems to be able to jumble sentences on public display boards. It seems harmless enough, causing “almost no destructiveness, just unexpected messages taking up space and slowing things down” (29).

Art Fish is a benevolent AI,³¹ which acts as doctor for viruses (175). It subsequently becomes Artie (an abbreviation of ‘artificial’) Fish. It (or rather he) is conscious (176), he names himself, he speaks and interacts with humans – but he is not human. Following the big stroke that afflicts his body, Mark's consciousness fuses with Artie into Markt (a homophone of marked), carrying the

³¹ For the more experiment-prone reader I suggest sampling a conversation with an artificial intelligence passing for God at *iGod*, which is advertised as “Chat with God. Funny Artificial Intelligence chat in a Flash interface. Jokes. Repenting made easy.” 18 Feb. 2008 <<http://www.titane.ca/igod/>>

implication that the unmarked member of the pair/opposition is the human. After this merging, Mark becomes a “configuration” that only “remember[s] his old existence as meat” (330). He dimly feels that he has a “universe of knowledge within him” (331). It is significant that the disembodied Mark refers to this merging with the AI in terms of sensory images: “the configuration identified as Art Fish was a wonder and a revelation to him, a synesthetic concert of intelligence in conscious mode” (380). In this way a new “form of life” is synthesized. The new configuration, Markt, retains some human characteristics such as feelings, being a sentient entity that possesses consciousness, but is not embodied. Therefore *Synners* presents different manifestations of the posthuman, where the posthuman and cyborg are not identical. The posthuman is a concept of a higher order and encompasses the cyborg.

In this context Featherstone and Burrows contribute to the working out of the human/posthuman taxonomy. They envisage a “complex continuum of human-machine fusions. At one end are human beings at the other fully simulated disembodied posthumans which can only exist in cyberspace” (1995 11). They include in this continuum bodies that have been manipulated on the surface for aesthetic purposes; bodies that have received inner fundamental enhancements and alterations, such as biochip implants, upgraded sense, prosthetic additions and replaced organs. The third group in the continuum are “the operators who move around in cyberspace whose bodies are wired up to computers for input and output flows of information” (11). The final category is that of the radically disembodied subjectivity.

Synners examines not just the issue of the different mergings of human and machine, but the related problem of human consciousness, and how it can be disembodied, postulating that it can be transferred to the machine and in this manner the subjectivity of the human defined as an informational pattern will be preserved. The novel asks us to consider the issue of individual identity apart from physical human existence within a technological framework. The boundaries between humanity and the machines are blurred. Old paradigms of self and identity have become obsolete. What the book suggests is neither an indictment of humanity nor an endorsement of

technology. Yet it presents technology in an accelerating culture as a potent force capable of facilitating escape, immersion, destruction, and even transcendence of self. Perhaps, in this manner, Cadigan is able to posit more than one viable answer and to reflect on the ambiguous attitude of humans towards technology.

The posthuman portrayed by Cadigan is not to be understood in any techno-deterministic terms as the inevitable evolution of *Homo Sapiens* into *Homo Cyberneticus*. Similarly the posthuman philosophical view critically re-examines the axiomatic ontological state of the human by drawing attention to the various technological interventions upon the body. For example, when considering the posthuman condition, Graham suggests that “transfiguration and redemption can be achieved within, not beyond the realms of technologies, human agency and material culture” (220). She finds it imperative to “rethink the model of ‘transcendence’” and ultimately “to *change* it” (220, emphasis in the original).

To summarize, Pat Cadigan portrays different manifestations of the posthuman, including an artificial intelligence, as well as male and female cyborgs. Cadigan is one of the few cyberpunk writers to challenge the notion that the body is simply ‘wetware,’ or “meat,” for the bodies of her characters remain indispensable to their notion of identity, and the lack of embodiment is perceived as a loss. Her attitude as regards the permeation of technology into everyday life and the human body is rather complex. By presenting the cyborg as a literal being, she filters through its image ethical issues related to the new technologies. On the one hand, Cadigan examines the abuse of science and its economic and ethical expediency, on the other, she partakes of the Enlightenment vision of progress, but laying all responsibility on the human, as to the means and ends to which technology is applied.

Her portrayal of the cyborg as the prime image of the posthuman transformation in technological culture is anti-utopian, though without partaking in Haraway’s irony and playfulness. Cadigan’s perspective towards embodiment is that of a materialist. Significantly, she presents the urge towards mythical transcendence as gender-marked, for it is her male characters who strive after disembodiment, not the female ones. Balsamo makes a point of this

specificity in Cadigan's portrayal of gendered bodies, "whereby the female body is coded as a body-in-connection and the male body as a body-in-isolation" (1995 223). Moreover, when the male characters achieve disembodiment, this is depicted as a fatal act, not only in the sense that it destroys the male body, but that it also has devastating consequences on the computer network and on society at large. I find that Cadigan adheres to Haraway's posthuman position in the discussion of the cyborg, and revises the relationships of human and technology, not as ones of subversion and exploitation, dominance and control, but as potential partnership, without trespassing the boundaries of realism.

Cadigan reasserts embodiment through the images of the gendered cyborgs: the males, through their self-destructive denial of their constantly failing and ailing bodies, stand in opposition to the positively marked females, who merge with technologies for the purposes of communication and labor. Still, as Hayles observes, "marked and failing bodies reassert their inevitability" (2005 64). The significance of the novel is not so much in taking a stance for or against embodiment, but in making us realize that there are many ways in which embodiment can (and will) take forms. The various manifestations of the posthuman presented in the novel "remind us that we are always embodied, but that the ways we are embodied aren't simple" (Gray 7). Cadigan's cyberpunk novel departs not only from the dominant cyberpunk view on the body and from the formulae of popular science fiction, but from the naïve futuristic optimism of techno-science as well. At the same time the body, as Cadigan has portrayed it, cannot be interpreted as the uncomplicated locus of identity, when advanced medical and digital technologies displace the givenness of corporeality.

The cyberpunk fiction analyzed in this chapter does not offer any innovations in the structuring and presentation of the textual body, for it remains traditional in observing the regularities of the print text. It is in the treatment of embodiment in cyberspace that this novel departs from the stereotype established by the early male writers of the cyberpunk movement.

CHAPTER THREE

REASSEMBLING THE BODY IN HYPERTEXT:
SHELLEY JACKSON'S *PATCHWORK GIRL*

There is a kind of thinking without thinkers. Matter thinks. Language thinks. When we have business with language, we are possessed by its dreams and demons, we grow intimate with monsters. *We become hybrids, chimeras, centaurs ourselves: steaming flanks and solid redoubtable hoofs galloping under a vaporous machinery.*

Shelley Jackson *Patchwork Girl*
“Body of Text/it thinks” (emphasis added)¹

An American writer and artist, Shelley Jackson holds a Bachelor of Arts degree in studio art from Stanford University and a Master of Fine Arts in creative writing from Brown University, where she studied with the prominent American writer Robert Coover, whose work has been associated with the launching and propagation of hypertext in its early days. Jackson’s work on the whole is playful and disquieting, as she sets out to create “a disrespectful text,” which “loosens the categories” (Jackson 1998a). Her groundbreaking cyberliterature is the highly acclaimed *Patchwork Girl*, published by Eastgate Systems using the software program Storyspace.

This hypertext was considered right from its publication one of the best examples of the form and received the Electronic Literature Award in 2001. Coover has nothing but praise for it: “Indeed, Shelley Jackson’s *Patchwork Girl* offers the patient reader, if there are any left in the world, just such an experience of losing oneself to a text, for as one plunges deeper and deeper into one’s own personal exploration of the relations here of creator to created and of body

¹ Citations from *Patchwork Girl* by Shelley Jackson do not indicate page numbers, as these are simply non-existent in hypertext. All quotes hereafter will identify separate writing spaces (pages) by indicating the major section first (in this case “Body of Text”) within which the sub-section (the lexia “it thinks”) can be found, where this particular text appears, usually indicating the pathway as found in a map of the narrative provided by Jackson.

to text, one never fails to be rewarded and so is drawn ever deeper, until clicking the mouse is as unconscious an act as turning a page, and much less constraining, more compelling” (2000 n.p.).² Apart from the positive reviews that it received, it was included as a tutor text by George Landow in his course on Hypertext Literature and has received revealing commentaries by many of his students.³

Jackson published two more hypertexts, the autobiographical *My Body, a Wunderkammer* (1997) and *Doll Games* (2001).⁴ She gave a major presentation of her work called *Stitch Bitch: the Patchwork Girl* at MIT’s Conference “Transformations of the Book” in 1998. She is a short story writer as well, and has published in print a collection of stories entitled *The Melancholy of Anatomy* (2002),⁵ presenting

² Coover is both her mentor and her staunch supporter. The quote is from his article “Literary Hypertext: The Passing of the Golden Age,” *Feed Magazine* 10 Feb. 2000. 19 May 2002 <http://www.feedmag.com/document/do291_master.html>

³ See the *Patchwork Girl Web*. 23 Feb. 2001 <<http://www.cyberartsweb.org/cpace/cpace/ht/pg/pglinks.html>> and George Landow, *Cyberspace, Hypertext and Critical Theory*. 23 Feb. 2001 <<http://www.cyberartsweb.org/cpace/cpace/cspaceov.html>>

⁴ I find it both refreshing and revealing that Jackson draws a parallel between the body and the famed Renaissance handmade cabinet of curiosities or wonders (that at times took the space of an entire room) – the *Wunderkammer*. It could include a collection of historical relics, of artifacts or objects of scientific interest, held by rulers, aristocrats, rich merchants and early scientists. This metaphor refers to the body as a composite of multifarious elements, as well as a piece of wonder. In addition, art historian Barbara Stafford has drawn a parallel between digital media and the Wunderkammer: “Looking back from the perspective of the computer era, the artifacts in a Wunderkammer seem less physical phenomena and more material links permeating the beholder to retrieve complicated personal and cultural associations. Looking forward from the Enlightenment world of apparently miscellaneous pleasure, we discern that scraps of wood, stone or metal, religious relics, ancient shards, exotic fetishes, animal remains, miniature portraits, small engravings, pages torn from a sketchbook, are the distant ancestors of today’s sophisticated software.” Quoted in Bolter and Grusin, 35-36.

Doll Games is written in collaboration with her sister Pamela. <www.ineradicablestain.com/dollgames/index.html>

⁵ The title of this book too demonstrates one of the major narrative strategies applied by Jackson. It is a postmodern intertextual commentary on the famous *The Anatomy of Melancholy, What it is: With all the Kinds, Causes, Symptomes, Prognostickes, and Several Cures of it. In Three Maine Partitions with their several Sections, Members, and Subsections. Philosophically, Historically, Opened and*

once again the body as completely dispersed into vital body parts. Her first print novel *Half Life* (2006) won the James Tiptree, Jr. Award for science fiction and fantasy. Even more radical is her experimental *Skin: A mortal work of art* (launched 2003) – a story published in tattoos on the skin of 2095 volunteers, called upon to participate with the short invitation to “become a word”.⁶ This original work of Jackson, where the body itself becomes a writing space, resembles to a great extent the performance art happenings that were the hallmarks of the 1960s counterculture in the US, as well as Peter Greenaway’s experimental movies *Prospero’s Books* (1991) and *The Pillow Book* (1997). All of Jackson’s works demonstrate a preoccupation, an obsession even, with embodiment, and the self as (re)inscribed through the body. Jackson explains in an interview: “I think in things. Complicated ideas come to me in the flesh, concrete metaphor with color, heft and stink” (1998b).

The majority of her fictions reveal her interest in the female body (often her own), especially as an ascribed site of monstrosity, as well as the literal and metaphorical image of diffusive subjectivity. Jackson’s obsession with the deviant, grotesque and monstrous body could be explained with the fact that, as the phenomenological approach of Merleau-Ponty for being-in-the-world has revealed, the healthy body is almost not experienced – it is absent. Once it deviates from the norm, however, either through disease or through physical damage, the body is perceived as noticeably present. For this reason too, even when not monstrous, the body as portrayed by Jackson is typically an imperfect area. She uses this foregrounding of the body’s imperfection, its permeability, its leakages, not to diminish it in any way, but as a strategy to heighten our appreciation of the body.

Jackson focuses on the body; its materiality, diffusion and ultimate undecipherability dominate her writing alongside the interconnected themes of embodiment and subjectivity. For her “the mind relies on something it cannot think, and conversely, the body relies upon something it cannot touch. I’m fascinated with the sticky stretch between matter and sense, both in us and in language” (Jackson 2002).

Cut up by Robert Burton, first published in 1621.

⁶ For more information on her writing, art and philosophy see her homepage: Shelley Jackson. *Ineradicable stain*. 18 June 2000 <<http://www.ineradicablestain.com>>

1. The Textual Body

Patchwork Girl by Shelley Jackson is a novel on CD-ROM written with a hypertext application. In this early piece of cyberliterature Shelley Jackson highlights specifically the materiality of textual and human bodies and this foregrounding happens in a hypertext, which can exist materially only in cyberspace. She uses the new medium to inquire into the production of subjectivity and its highly specialized relation to the human body.

In the opening lexia in the section “Broken Accents,” the text itself is personified and addresses the reader, suggesting in typical Jackson style the intertwining of the metaphors of body and text which dominates the whole work:

I am like you in most ways. My introductory paragraph comes at the beginning and I have a good head on my shoulders. I have muscle, fat and a skeleton that keeps me from collapsing into suet. But my real skeleton is made of scars, a web that traverses me in three dimensions. What holds me together is what marks my dispersal. I am most myself in the gaps between my parts though if they sailed away in all directions in a grisly regatta there would be nothing left here in my place.

(PG, “Body of Text/dispersed”)

Incorporating parts taken from other fictional and non-fictional texts this hypertext, like the monster’s body, highlights the significance of hypertextual gaps and physical scars that simultaneously sustain and suspend the integrity of text and body. In *Patchwork Girl* Jackson imagines that the female companion Victor Frankenstein started to create for his male monster, but later destroyed in the original text of 1818, was secretly finished by Mary Shelley herself. The monster in Jackson’s “re-crafting” of the story becomes Mary Shelley’s lover and then travels to America, where it goes through numerous adventures and acquires the name Patchwork Girl. Towards the presumable end of the story in the early 1990s, the reader finds the female monster already 175 years old, leading a nomadic existence in the desert in Death Valley, which

serves as a counterpoint to Victor's male monster roaming the icy expanses of the Arctic. When spotted by tourists, the Patchwork Girl terrifies them, as they take her by mistake for a yeti.

The hypertext *Patchwork Girl* (PG) consists of 323 lexias varying in length from a single sentence to about 300 words. The lexias are joined by over 400 links, which create multiple reading pathways through the text. The metaphor of the patchwork, contained in the very title of the novel, refers to the essence of hypertext – the piecing together of a body of text of linked chunks of intertextual references not only to Mary Shelley's *Frankenstein* and L. Frank Baum's *The Patchwork Girl of Oz*, but to Donna Haraway, Jacques Derrida, Jean Lyotard, Gilles Deleuze and Felix Guattari – mirrored by the story of a female monster whose body is sewn together from the parts of dead women by Mary Shelley herself.

Print novels from a structural point of view are unicursal, while cyberliterature is both figuratively and literally multicursal. The structure of *Patchwork Girl*, though rather complex, is not as baffling as that of other similar fictions. This novel consists of several sections, two of which – “Story” and “Journal” – could be read in a sequential manner, as they have a plot-like structure, approximating a linear narrative. The others are “Graveyard”, “Crazy Quilt” and “Body of Text,” each of which is divided into subsections and is intertwined through links with the others.

The “Journal” is the repository of Mary Shelley's thoughts and feelings written in Geneva. There she records her complex relationship with the female monster – maternal, creative and lesbian. The “Story” section resembles most a conventional novel, which includes both excerpts from *Frankenstein* woven in its textual body and the monster's new adventures. It is divided in six parts. The first one, “M/S,” recounts the lesbian love affair from the point of view of the creature. The second, entitled “Severance,” relays the decision of the creator and her creation to break up, as well as the memorable scene where they exchange patches of skin and graft them on each other's bodies as mementos of their peculiar relationship. The third subsection, “Seagoing,” relates the monster's crossing the Atlantic, alongside the odd experience of cross-dressing. The part entitled “Séance” includes some of the adventures of the monster in the

New World, especially the crucial scene where she tries to purchase for herself a name, a past and an identity from a woman she meets by chance. “Falling Apart” and “Rethinking” relate the humorously rendered disintegration of the body of the monster and how this acts as an allegory for embodiment and subjectivity.

In the “Graveyard” part the reader can find the separate stories of the women, a man and even a cow, from whose body parts Mary Shelley assembles the monster. This is how the creature generalizes about her peculiar state: “Born full-grown, I have lived in this frame for 175 years. By another reckoning I have lived many lives (Tituba’s, Jane’s and the other’s) and am much older” (PG, “Graveyard/I am”). By giving a voice to her separate body parts, Jackson attributes to most of these characters an individuality of their own, and in this manner achieves a polyvocal effect in the narrative. For example, the monster’s eyes belong to Tituba, a real life figure – the West Indian slave who was jailed during the Salem witch trials.

“Body of text” is a non-fictional section of the narrative that focuses mainly on metafictional issues of writing and language, as well as on speculations about human bodies. Here Jackson explores the peculiarities of writing in the new medium and follows the line of thought introduced above as regards the intermingling of body and text. In true postmodern fashion, Jackson deconstructs the boundaries between fictional and non-fictional texts. “I am not impressed by the difference between theory and fiction,” she says, “All ideas about reality are fictional and some of them are beautiful too” (1998b).

The “Crazy Quilt” part, also non-fictional, is a mass of interrelated fragments, where each patch consists of quotes from diverse sources with accompanying observations and interpretations. It is a patchwork produced by the many textual appropriations, internal references, citations and rewritings of relevant theoretical works, providing a commentary on the nature of the narrative in the digital medium.⁷

⁷ This is one example: “**At first I couldn’t think what to make her of. I collected bones from charnel houses, paragraphs from *Heart of Darkness*, and disturbed, with profane fingers, the tremendous secrets of the human frame, but finally in searching through a chest in a solitary chamber, or rather a cell, at the top of the house, I came across an old patchwork quilt, a fabric of relations, which my grandmother once made when she was young.**” Below this

The “Notes” part serves the role of footnotes and bibliography.

The reading of the hypertext is made easier by the various ways offered to the reader for navigation through the text. One helpful tool is to make the links in a given lexia visible to the reader, alongside the source lexia and the target lexia to which they lead. On the basis of the associations triggered in the reader’s mind, s/he can make a choice as to what path to choose. In addition there are four different types of maps that help structure the narrative and provide some orientation to the reader.

The “chart map” view provides another visual rendering of the story in the form of colorful blocks of text (Figure 6). The program has another option – it allows the reader to add notes and to save his/her reading path.

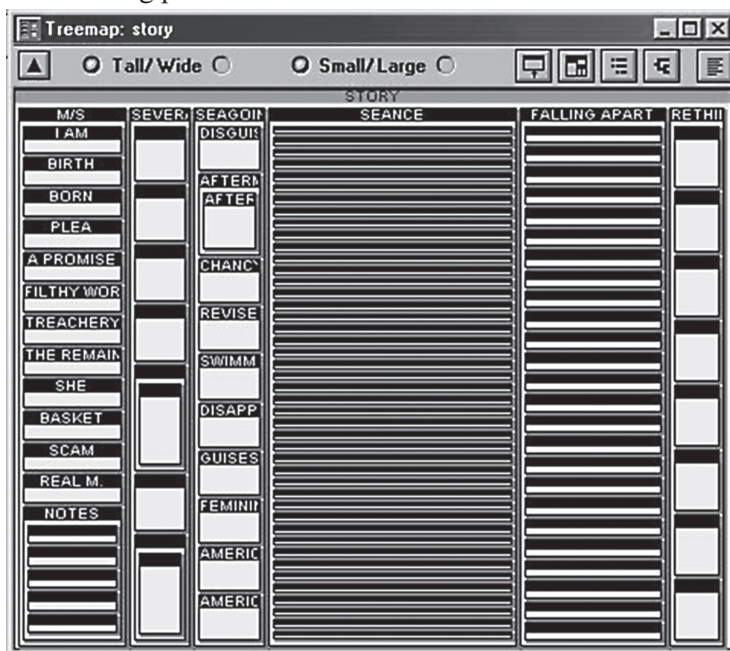


Figure 6. Screenshot of the Chart map of *Patchwork Girl*

“recombinant text” Jackson cites her sources as follows:

L. Frank Baum. *The Patchwork Girl of Oz*, p. 15; *M. Shelley. Frankenstein*, 1985, p.98; *J. Bolter; M. Joyce, J. Smith & M. Bernstein. Starting with Storyspace*, p. 89; Jean-Francois Lyotard. *The Postmodern Condition*, 15.

The “treemap,” for example, provides a hierarchical structuring of the story in the reversed image of a tree trunk and its branches (Figure 7). It links in an original way the five main black-and-white drawings of the hypertext with the main sections of the text.

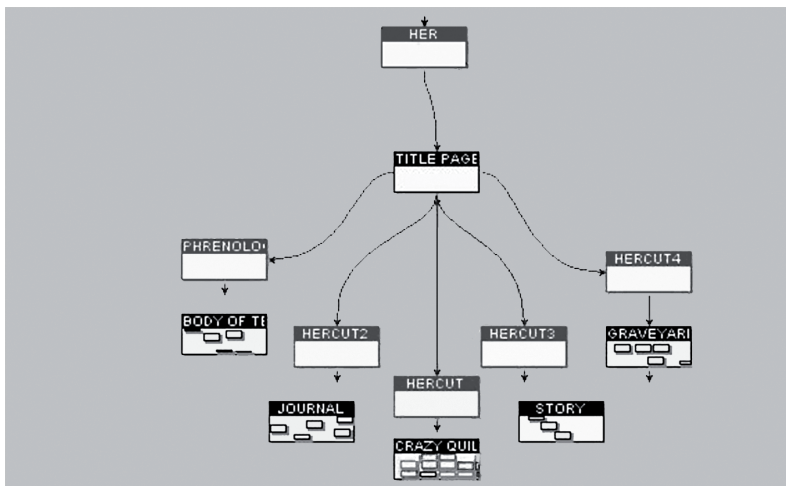


Figure 7. A screenshot representing the Tree map of *Patchwork Girl*

The role of the medium used for the creation of this hypertext ought to be emphasized, as Jackson herself does. Storyspace as a hypertext application is a software program created in the US by Mark Bernstein, Jay Bolter, Michael Joyce and John Smith. Katherine Hayles among others finds that “about 1987 through 1995, first-generation writers used Storyspace to create some of the most widely discussed literary hypertexts, including Michael Joyce’s *afternoon*, Stuart Moulthrop’s *Victory Garden* and of course, *Patchwork Girl*. These works have often been called (in retrospect) the “Storyspace school” of hypertext writing [...]” (Hayles 2000 n.p.). The program allows the author to write and link blocks of text (lexias). Moreover, the author could make use of “guarded fields,” i.e. conditional links. It is precisely these links that allow him/her to establish pre-scripted sequences and to determine that, provided the reader follows a certain link and opens a certain lexia, she or he will be taken henceforth on a certain reading path.

One of the most outstanding features of this early hypertext application is that it offers a visual display of the story as structure. This is best manifested in the peculiar spatialization and visualization of the text. Storyspace is a restrictive writing space, especially in comparison with present-day multimedia applications which utilize animation and sound. Nevertheless, Jackson admits to being inspired to write precisely by the linked and nested rectangles in the map view of Storyspace. As she says: “when I first started working in electronic media, the applications all seemed fraught with metaphoric implications that not only bled into the work I was doing, but inspired it” (Jackson 2002). The visual display made possible by the software reminded her of a patchwork quilt,⁸ and this eventually evolved into the central metaphor of text and body.

1.1. Reading hypertext

Patchwork Girl, even when read in the most conventional way possible, poses a number of dilemmas. While the text in a printed book is a stable, fixed, recognizably material object, the computer as a repository of the text renders it virtual in a variety of ways, and this affects its very structure. Thus even if hypertext fiction is seen as having a plot of its own, though it has been excessively deconstructed and cannot be recounted even, the plot does not transpire without the actual *performance* of the text by the reader. This fact has led critics to consider hypertext fictions as de-plotted, or to question to what extent they make use of the narrative mode at all.⁹ “We could say there is no story at all; there are only readings,” writes J. Bolter in his analysis of one of the first hypertexts, *afternoon*, by Michael Joyce (124).

Cyberliterature offers a large number of potential narratives, i.e. scripts of the ideal text according to Aarseth, that do not necessarily

⁸ As Jackson emphasizes: “traditional quilts are machines for reminiscence” (1998a).

⁹ In *Cybertext. Perspectives on Ergodic Literature*, Aarseth defines hypertexts as *ergodic* texts that require navigation and may include some traces of narration. See especially Chapter Four, “No Sense of an Ending: Hypertext Aesthetics”.

even exhaust the potential arrangements of the text. The structure of hypertext makes possible (even inevitable) the transformation of narrative sequencing. But if you read narrated events in a different order, does this constitute a different narrative? A conclusive answer can hardly be given. These separate readings through which the work of fiction is realized, in my view, may be understood in terms of Roman Ingarden's concretizations of the literary work. In a similar manner each concretization of a hypertext reading delimits the particular script of the text.

Critics insist that hypertext literature discourages deep reading, and encourages instead reading surfaces, skimming and frenetic motion, clicking mindlessly, avoiding close attention, contemplation and deep engagement with the text. Readers are engaged more with the technology of the media, forced to think about the structure, about issues of organization, order, closure, and less about the story itself. In order to get to a story, they need to consider all these issues first. Furthermore, hypertext fiction calls into question fixed sequence, definite beginning and ending, the conception of unity and wholeness of narrative.

The new digital medium requires reading practices that are less of the traditional type – linear and progressive – but ones that are rather transverse and interrupted. Reading has been generally assumed to be a sequential and continuous process. The reader progresses from a clearly marked point – the beginning of the text, through a carefully laid out route to another definitive point considered the end. In following this path, the reader builds up numerous predictions about the text. This is made possible because the printed text is stable and fixed in physical space, so it can be viewed as an equally fixed and predictable object in mental space. The Gutenberg habits, more specifically the traditional strategies for reading literary texts that have been defined by literary critics under more or less the following rubrics – reading for the plot, reading for order, sequence and design (the famed linearity and sequentiality of the printed texts), reading for closure – are currently under attack.

When approaching literary texts written in hypertext and utilizing the specificities of the digital medium, the reader experiences a disruption of these habitual reading strategies, a sense of bewilderment

and confusion, even the sense of being lost in the textual body.¹⁰ The absence of closure, indeed of order, is intrinsic to the structure of hypertext, though even when discussing textual openness regarding print texts, Jacques Derrida has argued that closure is undesirable, and what is more – it is impossible. The absence of closure is not artificially imposed, for it proceeds from the very structure of hypertext, and is as essential a feature as is its non-linearity.

Hypertext, then, requires the active participation of the reader in creating his/her own path of reading. J. Yellowlees Douglas has defined the interaction between reader and digital text, arising from electronic writing, as consisting of episodes connected by decision points – the decision of the reader, which would lead to a change of the theme of the discourse (5). Apart from being confused by the labyrinthine structure of the story, the reader operates under the constant demand of making decisions and choices by looking for links, maps, default paths and other indications as to how to proceed in the story. For these reasons, the reader's interactivity with the text and especially with the medium, which brings the text to him, acquires a new meaning. Thus the particularities of the medium in its present form preclude the possibility of the immersion of the reader in the textual world.

However, removing linearity and fixedness from hypertext does not remove coherence. Coherence is what the reader strives after, so the reader of cyberliterature cannot dispense completely with linearity. The process of reading hypertext, of making meaning, of building some kind of order out of chaos, requires a certain degree of sequentiality. Jackson also states that she uses the potential of hypertext so as “to allow structure to arise out of the inclinations of the material itself, instead of imposing linear order” (1998a). The non-linear body of hypertext is constructed of linear chunks that can be re-ordered by the reader, but only within the boundaries posited by the author.

Consequently, linearity, though not intrinsic to the structure of hypertext fiction, remains a characteristic of the reading experience,

¹⁰ For an in-depth analysis of the problem of narrative in hypertext, see J. Yellowlees Douglas, *The End of Books or Books without End? Reading Interactive Narratives* (Ann Arbor: U of Michigan P, 2001).

realized through a set of possible network linkages. The reader struggles to impose an order and establish a causal chain of events temporally organized in a linear fashion, and this remains part of the reading practice, in spite of and often in resistance to what the hypertext has to offer. A useful reminder here is J. H. Miller's statement on the significance of causality: "A story is readable because it can be organized as a causal chain... A causal sequence is always an implicit narrative organized around the assumption that what comes later is caused by what comes before, 'post hoc, propter hoc.' If any series of random and disconnected events is presented to me, I tend to see it as a causal chain".¹¹ To this Landow adds: "We cannot avoid imposing some set of connections, like a phantasmal spiderweb, over events that just happen as they happen" (1997 127).

To summarize, hypertext fiction does not do away with narrative. Readers always fabricate their own structure, sequence and meaning, while reading for a story (Landow 1997 117). This seems an inbred quality of our cognitive makeup. Now the most difficult question is how do we get to the narrative in a text that resists any principles of narration the reader is familiar with so far? Even if coherence is not achieved in terms of the narrative as a whole, the reader reads until some sense of relevance and significance is achieved, bringing the narrative to a subjective closure. In this manner I can posit the limits of the particular hypertext that I am discussing, which after all represents my own subjective reading of it within the matrix of available possibilities designed by the author herself.

The new medium reifies the metaphor of reader response, for the reader participates in the making of the text as a sequence of words. Even if the author had written all the words, the reader must call them up and determine the order or presentation by the choices made or the commands issued. There is no single univocal text apart from the reader; the author writes a set of potential texts, from which the reader chooses.

(Bolter 158)

¹¹ J. Hillis Miller, quoted in Landow, *Hypertext 2.0*, 1997 127.

Hypertext obliterates the boundary between the text and its readings, provided we accept that such a division is valid. In other words, hypertextual applications render impossible the distinction between text as object and text as experienced by the reader. The actual narrative emerges only in conjunction with a specific reading. Therefore, M. Joyce's insight that texts are written as they are read is validated, and once again it should be emphasized that this "writing" of the text is done literally under the form of continuous re-readings (Joyce 1995 235).

Moreover, non-linearity, which is intrinsic to hypertext, has been repeatedly used previously in postmodern fiction to focus on ontological issues. Non-linearity in hypertext has a function similar to that pointed out by Brian McHale as regards postmodern fiction:

Self-erasing narratives [...] violate linear sequentiality by realizing two mutually exclusive lines of narrative development at the same time, but this is not the only means of making linear sequences self-erasing. One can also "bend" a sequence back upon itself to form a *loop*, in which one and the same event figures as both the antecedent and the sequel of some other event. The presence of the same event at two different points in the sequence leaves the reader hesitating between two alternative constructions of the true sequence ...

(1991 108, emphasis in the original)

In hypertext the reader is helpfully offered a finite number of choices. The lexias already visited determine where the reader can proceed to from there. In *Patchwork Girl* the links are hidden, i.e. not visible, but the software program offers an option where, by the choice of the reader, they can become visible. Some links are conditional, as they appear only after the reader has traversed a certain path and opened a number of lexias. Sometimes the reader even reaches a dead end in the narrative.

Having exhausted the lexias in one of the sections, for example "Journal," the reader is made to form a loop to the initial lexia, entitled "her," containing one of the drawings. In a similar manner,

having opened the lexia “eaten,” followed by “embryo boy” and “memento,” the reader has two options: to go back either to “eaten” or to the title page and to plunge into the narrative at a different point, where s/he will read a different arrangement of the text. Thus s/he is left with no other option but to retrace his/her steps, to enact the loop, McHale describes in reference to postmodern narratives.

In such hypertexts the users can affect only the order in which the lexias of the story appear by clicking on links. Consequently the reader cannot be considered a co-author of this particular hypertext, but a performer of the text, who is given the limited freedom of choosing among prefabricated paths. The proverbial authoritative empowerment of the reader in hypertext is misleading. *Patchwork Girl*, in my view, can be described more adequately by using Roland Barthes’ opposition between the “readerly” and the “writerly” texts (1974). The “readerly” text consists of an assemblage of signifiers that the reader passively deciphers and finally arrives at a cohesive and centralized meaning. In contrast, when describing the “writerly,” Barthes states that “the goal of a literary work is to make the reader a producer of the text” (1974 4), and this is precisely what one has to become when reading hypertext.

The individual path of each reader has been defined as a contour: “A virtual representation of the reader’s experience of the hypertext as it unfolds in time.”¹² Moulthrop expands this idea further:

The contour is real but virtual, like the “virtual machine” created by a time sharing system; it exists only as an articulation of the reader’s interaction with the text. It corresponds in a rough way with what theorists of conventional reading call the “virtual work,” a discursive construct arising out of the intersection of the reader’s experience (or “repertoire”) and the semantic content of the text.¹³

What follows is the analysis of my contour as I meander through the uneven terrain of this hypertext.

¹² Michael Joyce quoted in Stuart Moulthrop, *The Shadow of an Informant: An Experiment of Hypertext Rhetoric*. 23 Sept. 2000 <http://raven.ubalt.edu/staff/Moulthrop/hypertexts/hoptext/A_beginning07084.html>

¹³ Ibid.

1.2. *Experimentation with interface: visualization and spatialization*

The graphic of a dismembered female body, “Body of Text/hercut4,” incorporated in the story, is linked to a lexia called “graveyard” that reads: “I am buried here. You can resurrect me but only piecemeal. If you want to see me whole, you will have to sew me yourself” (“Body of Text/graveyard”).

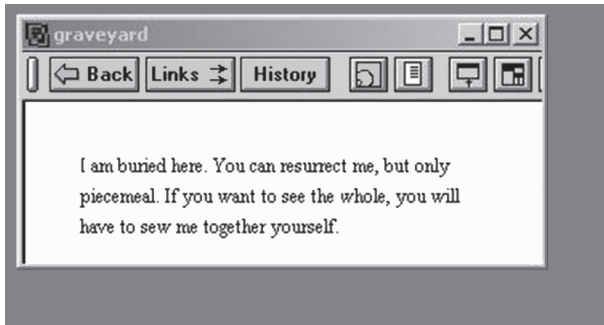


Figure 8. Screenshot of the lexia “body of text/graveyard”

This text is an indirect commentary on the role of the reader as one who construes and composes worlds in hypertext. It also suggests that hypertextual reading, being associative by definition, is more “natural”. So the paths build up the individual map of each reading and lead to the gradual unfolding of the story.

Instead of closure, linearity, and sequence, hypertext offers alternative ways for organizing texts. These I put under the general heading of *topography*, which is realized in *Patchwork Girl* through the maps and links.¹⁴ This suggestion seems natural, since cyberspace has generally been conceptualized in terms of space. The metaphors of “the garden of forking paths” and of a labyrinth often used in the critical literature describe only the first impression of trying to fathom the structure of hypertext.¹⁵ For me topography

¹⁴ Refer to J. Bolter, “Topographic Writing: Hypertext and the Electronic Writing Space”, *Hypermedia and Literary Studies*, eds. P. Delany and G. Landow (Cambridge, Mass. and London: The MIT Press, 1991).

¹⁵ For a comparison of the structures of the early hypertexts: *afternoon*,

is a more appropriate metaphor for describing the syntagmatic and paradigmatic relations of a hypertext fiction and its readings. Thus in hypertext topography becomes less a virtual metaphor and more a real compositional device through which the text is written and read. The map of a hypertext presents the layout of the narrative in a highly organized way. Maps also offer the possibility of arranging and discovering a story spatially instead of linearly as in traditional narrative. The writer is transformed into a designer and a guide through a seemingly hard and complicated terrain, while the reader has to refer to the map in his/her effort to traverse this space.

Maps explicate interconnectedness often and can have different layouts. When the reader enters the textual body of *Patchwork Girl* s/he is offered various options of a map view incorporated in the Storyspace program itself. The reader can enter the story from any "spot" in these maps and traverse his/her trail and can also frequently recourse to them whenever s/he gets lost in the textual space. Maps are also an instance of the visualization of the spaces in this hypertext. In practice they are a useful tool which helps the reader navigate through the hypertext. Some studies have revealed an interesting tendency: readers disregard the implicit links in the narrative in favor of those explicated graphically through the map.¹⁶

The reader expects to be led somewhere further in the story, an expectation that is continuously thwarted by the realization that the link is in the text as much to orient as to disorient. Shelley Jackson writes about this experience in a self-reflexive lexia called "this writing" from the section "Body of text," where she refers to the act of reading hypertext as dreaming:

Assembling these patched words in an electronic space, I feel
half blind, as if the entire text is within reach, but because of
some myopic condition I am only familiar with in dreams, I

Victory Garden and *Patchwork Girl* see Raine Koskimaa, "Visual Structuring of Hyperfiction Narratives," *Electronic Book Review* 6 (1997-1998). 12 Mar. 2000 <<http://www.altx.com/eb/eb6/6koskimaa/6koski.htm>>

¹⁶ See Stuart Moulthrop, "Reading from the Map: Metonymy and Metaphor in the Fiction of "Forking Paths", *Hypermedia and Literary Studies*, eds. George Landow and Paul Delaney (Cambridge, MA: MIT Press, 1991), 119-132.

Hypertext is a polylogue, and Shelley Jackson makes full use of the promiscuity of its connectivity. The links in it are polysemantic signifiers that both lead the way and lead the reader “up the garden path”. Links as gaps make possible the act of “directed creation” as described in reader-response theory, a process in which the reader is actively involved. The reading process is made possible only by laboriously filling in the gaps of the text, the black holes physically presented on the page by the links.

A further feature of this textual body that has to be pointed out is that not only are the structure and organization of the narrative brought to the fore, but the textual surface is rendered less as a string of verbal signs and more as an image. This has inspired K. Hayles to refer to the text on the computer screen with a metaphor she has borrowed from D. Haraway and that has gained wide popularity – “a flickering signifier”. For her “the transformation of the text from a durable inscription to a flickering signifier means that it is mutable in ways that print is not, and this mutability serves as a visible mark of the multiple levels of encoding/decoding intervening between user and text” (2000 151). The typography of hypertext is instrumental to its interface, to the organization of its content and becomes an intrinsic part of the meaning of the narrative. This is best illustrated by two techniques: the extreme visualization and spatialization of the text.

The visual element in hypertext does not just supplement the textual, but becomes the dominant one. It is crucial to note that any text, and the word for that matter, is also an image. The word in its graphic form as it appears on the printed page is also an image rendered invisible by the technology of the printing press and the reading practices developed over centuries. In this particular hypertext the structuring of the text through the various types of maps is also a significant manifestation of the tendency to render the text highly visible. Another example of the intermingling of the visual and the textual is the opening graphic of the hypertext *Patchwork Girl*. An image of a naked woman’s body against black ground and traversed by multiple dotted lines appears in a lexia called “her” even before the title page. The dotted lines have multiple significations. They are the seams of the female monster’s patched

body; they refer metaphorically to the dispersal of subjectivity; they dis/connect the multiple stories that the reader discovers in this fictional web; they serve as a symbol of the main principle of organization of the narrative as well.

Linked to the lexia “her” are several graphics, which represent a dismembered female body. Of special interest is the lexia containing the graphic “hercut 4” (see Figure 10) for it displays the body parts as scrambled, and one of the pieces of this body-as-puzzle picture is a text, visually represented as a torn fragment of a page.

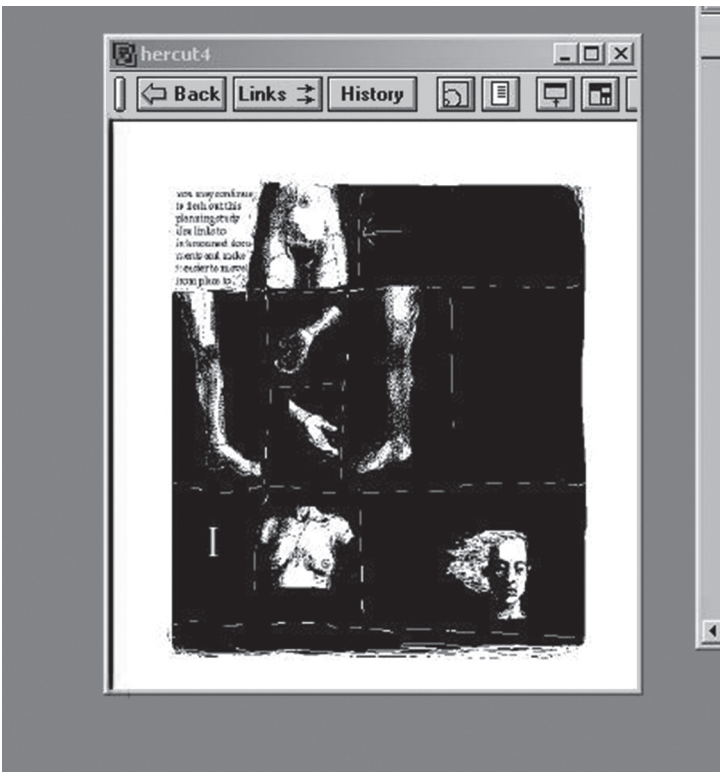


Figure 10. Hercut4

In this case Jackson has literally interwoven the graphic of the female body with the visual display of the text. The dispersal of the female body and the text suggests that the relation between

revealing the deep interpenetration between the conception of the hypertextual body and of stereotypical femininity: “The banished body is not female, necessarily, but is feminine. That is, it is amorphous, indirect, impure, diffuse, multiple, evasive. So is what we learned to call bad writing. Good writing is direct, effective, clean as a bleached bone. Bad writing is all flesh, and dirty flesh at that ... Hypertext is everything that for centuries has been damned in association with the feminine” (1998b). Jackson thus asserts a parallel between the feminine and the multiplicity, fluidity and the inclination towards transformation of material and hypertextual bodies. She reconsiders the feminine, which otherwise, in her view, “gets edited out of literature” and “gets exiled from the realm of meaning” (1998b), as central to her argument of the role of the textual and human body.

Another similar example of the interweaving of human and textual bodies, perhaps one of the most original lexias in this hypertext, is “phrenology” (Figure 11) – a drawing that reaffirms the relationship between body, text and space.

Showing a massive head in profile, “phrenology” gives us the brain divided in sections by lines. Each separate zone contains either a woman’s name or a phrase. Clicking on a name takes the reader to the lexias telling the women’s stories from whose parts the monster’s body was assembled, while clicking on the phrases leads the reader elsewhere in the hypertext. The head is drawn in such a way so as not to be individualized, i.e. it is given in profile, the color of the skin is not definitive, and the race and the gender of the person drawn are equally ambiguous. Having looked closely at the eye I am still left in doubt whether this is the head of a living or a dead person. Altogether, this picture serves to generalize the message carried by the hypertext.

An additional argument that the Patchwork Girl is a collective generalized image is supplied by the question regarding the color and texture of her skin. Since her body parts are taken from different corpses, this leads to the “motley effect of patched skin” (“Story/M/S/I am”). Her creator, too, notices this diversity, which literally transforms the surface of her skin into a patchwork: “the various sectors of her skin were different hues and textures, no match

perfect,” so that “warm brown neighbored blue veined ivory” (PG, “Journal/she stood”).

Alongside visualization the strategy of spatialization is employed in a variety of ways in the new medium. Being inherent to the very act of writing and reading, space alongside print is the primary icon of the traditional book. In pre-writing times oral speech moved through time. In contrast to it, writing moves through space. As a result, writing from the point of its invention onwards has been in large measure “the spatialization of thought” (McLuhan, 1995 285), while at the same time offering the possibility of control over space. Walter Ong relates the further commitment of words to space associated with the introduction of the printed book: “Writing moves words from the sound world to a world of visual space, but print locks words into position in this space” (121). Print regulates the spatial relation between words and the white space between them. It is by imposing meaning on the visual surface of print, as Ong has shown, that each of its constituents may take on different significations.

The printed book has become dematerialized. R. Ingarden has found that: “in reading a printed text the individual letters and verbal signs do not have individual qualities for us; they simply do not matter” (20n). As a consequence, “the verbal body of the book is simultaneously grasped as an ‘expression’ of something other than itself” (ibid.). In other words, the reader looks *through* the text, rather than *at* it. This rejection of the materiality of the book ultimately transforms it into a series of cognitive images and ideas.¹⁷

On the other hand, this standardized spatialization format of the printed page has turned into rigid confines, challenging many writers

¹⁷ An extreme example of the opposite process of foregrounding the materiality of the text is concrete poetry, which Ong considers to be the climax of the interaction between sounded words and typographic space. Concrete poetry is the precursor of kinetic poetry in cyberspace. The moving electronic poems on the screen become more than visual pictures of letters, as they undergo continuous transformations: they vanish and resurface, change shape and merge with pictures or sounds thus revealing the many possibilities of hypermedia and totally eclipsing the typed text. Sites featuring kinetic poetry can be found at the following addresses: <<http://www.unuweb.com/>>; <<http://www.wordcircuits.com>>; <<http://wings.buffalo.edu/epc>>

to try to transgress it. Tampering with the typography of the text has become a legitimate form of experimentation in the postmodern novel, which invites us to look *at* the text instead. The strategies used in print text and discussed by Brian McHale¹⁸ have a direct bearing on the structure of hypertext. Using spatial displacements of texts, incorporating split text, arranging two or more parallel texts on a page, mixing visual and verbal signs in the “schizoid” text (190), shaping segments of text in various typographic arrangements – all these various page layouts can be found in printed postmodern fiction, where they achieve a foregrounding of the materiality of the text (181).

The page has been the playground for many American writers in the 1960s and 70s. The writers of the surfiction movement, for example, deconstruct the conventional techniques associated with narrative organization in the traditional printed form.¹⁹ They reinvent the page as a visual metaphor in a variety of ways. By using graphic icons, pages of different colors, marks, drawings and different typefaces, they bring into distinct contrast blank space and printed text. In addition, type in certain printed texts is displayed diagonally, vertically, around squares or circles. Thus, the reader is compelled to physically interact with the book by turning it around. Interaction with the text through the process of browsing and continuously moving through it up and down or back and forth is essential to the reading process on the computer screen, too.

Shelley Jackson favors spatialization in her fiction over sentence-by-sentence linearity. The sentence is restrictive, while the “open spaces” of hypertext suggest range, rendered metaphorically through the body and its parts. “The sentence,” for her, “is not one, but a cluster of contradictory tendencies. It is a thread of DNA – a staff of staphylococcus – a germ of contagion and possibility” (1998b). She finds that: “[s]patializing text makes it more like a body” (2002). The author comments: “First, because our infinitely

¹⁸ See Brian McHale, *Postmodernist Fiction*. Chapter 12 “Words on Paper.”

¹⁹ For making explicit the connection between surfiction and hyperfiction see Mark Amerika, *TRIPTYCH: HYPERTEXT, SURFICTION, STORYWORLDS* (Alt-X Publishing Network, 19 May 2000). 29 May 2001 <<http://www.altx.com/amerika.online5.1.html>>

various forms are composed from a limited number of similar elements, a kind of alphabet, and we have guidelines as to which arrangements are acceptable, are valid words, legible sentences, and which are typographical or grammatical errors: monsters” (PG, “Body of Text/bodies too”). It is precisely in this aspect of the textual structure that the reader finds the greatest overlapping between the textual and human body.

The spatialization of the text in hypertext, too, does not have just an ornamental role, but a function similar to the one just described. However, experimentation with narrative interface in hypertext achieves an additional purpose. By destroying the conventions of the arrangement of the text in print, hypertext achieves a *rematerialization* of the text. In other words, the text ceases to be a sequence of conceptual images and ideas and retrieves its body. Readers are made to attend closely to the body of text, in order to make any sense of it. The improvisation with ty(o)pography in these virtual fictions sends the reader to the screen, where the text has to be performed before it can be read.

In the final analysis, it is primarily through the complex enactment of linking structures that: “this text foregrounds the materiality of fictional bodies, authorial bodies, readerly bodies, and the writing technologies that produce and connect them” (Hayles, 2000). Spatialization through images, linkage, mapping, and the heightened visualization of the text have become pivotal to the process of organization of the fictional text. Spatialization in hypertext is polymorphous, and conducive too to the organization of these fictions that seem deceptively disorganized. The abrupt disruption of space in cyberliterature splits the meaning of words, thus interrogating the ontological status of the text and the ontological stability of the worlds created in hypertext.

The function of postmodernist fiction, as well, has never been to mirror reality. Instead fiction serves as one of the “discourses by which we construct our version of reality...” (Hutcheon 40). For McHale, in postmodernist fiction the questions usually asked are: “Which world is this? What is to be done in it? Which of my selves is to do it?” (1991 10) In this context Hutcheon argues that the ontological cannot be separated from the epistemological quest,

stressing the prevalent tendency of postmodernist art “to doubt and to search” reflected both in the substance and in the shaping of the form of fiction. Hypertext continues the tendency of postmodernism to foreground and lay bare the process of world-making and -unmaking.

Jackson uses postmodern narrative strategies in her hypertext. “Hypertext,” she finds, “just makes explicit what everybody else does already” (1998b). In this manner she makes abundant use of collage and pastiche writing. For Jackson “collage writing is stripped of the pretense of originality, and appears as the practice of mediation, of selection and contextualization, a practice almost of reading” (1998b). In a similar manner, fiction from the postmodern perspective is open to an infinite play with other texts, discourses and cultural practices as posited specifically in J. Derrida’s *Grammatology* and in R. Barthes’ “Theory of the Text”.²⁰ The sequential structure of print texts is continuously “disrupted by a particular dense network of interconnections and intertexts” (Hutcheon 15). Jackson remarks that “hypertext is schizophrenic: you can’t tell what’s the original and what’s the difference” (1998b). From this emphasis upon openness and discontinuity comes the conception of hypertext as a vast assemblage with montage-like textuality, which foregrounds the writing process and therefore rejects the deceptive transparency of the textual spaces.

Landow in his analysis of *Patchwork Girl* as textual collage writing finds that: “Shelley Jackson’s brilliant hypertext parable of writing and identity” creates “a hypertext Everywoman who embodies assemblage, concatenation, juxtapositions, and blurred, re-created identities – one of the many digital fulfillments of twentieth-century literary and pictorial collages” (2000 163). Traditional linear writing associated with print tries to make the

²⁰ “Any text is a new tissue of past citations. Bits of code, formulae, rhythmic models, fragments of social languages, etc., pass into the text and are redistributed within it, for there is always language before and around the text. Intertextuality, the condition of any text whatsoever, cannot, of course, be reduced to a problem of sources or influences; the intertext is a general field of anonymous formulae whose origin can scarcely ever be located; of unconscious or automatic quotations, given without quotation marks” (R. Barthes 1981 39).

points of suturing text invisible, so that the result appears as a logical expansion of ideas. However, the digital medium entails a different approach to writing. The qualities of collage in Landow's view are fundamental to hypertext, and "characterize a good deal of the way we conceive of gender and identity" (2000 164).

The hypertext environment is singularly conducive to the practice of intertextuality that so marks the body of *Patchwork Girl*. Following the tradition of postmodern American literature, which has turned fiction writing into a "game," not only by including numerous intertextual references, but also, more distinctively, by revising whole classical texts. Shelley Jackson follows this tradition and among her more recent and familiar precursors are women rewriting men: Jane Smiley's *A Thousand Acres*, which "revisits" Shakespeare's *King Lear*; Joyce Carol Oates' *The Turn of the Screw*, which indirectly comments on Henry James' work; Kathy Acker's *Don Quixote* and her *Great Expectations* "revising" in significant ways some passages from the parent novels.

Intertextuality and metafictionality render irrelevant the distinctions between the inside and outside of this particular text. The examples are overflowing. Jackson quotes the famous passage from the preface, written by Mary Shelley to the 1831 edition, where she urges her "hideous progeny to go forth and prosper" (PG, "Story/severance/hideous progeny"), referring, as has been interpreted, simultaneously to the creature and her novel.²¹ Jackson rewrites this passage in the lexia "thanks," linked to the previous one by way of commentary and emphasis on this dual monstrosity: "Thanks, Mary, for that kindness, however tinged with disgust. Hideous progeny: yes, I was both those things, for you, and more. Lover, friend, collaborator. It is my eyes you describe – with fear, yes, yellow, watery, but speculative eyes" (PG, "Story/severance/hideous progeny/thanks"). Jackson subverts the original meaning by adding new dimensions to the relationship between creator and creature and finally changing the status of the monster. Indeed, as *Patchwork Girl* unfolds in each reading session of mine, I realize the celebrated freedom from mimesis which this hypertext flaunts.

²¹ This has been suggested by the critic Barbara Johnson, "My Monster/My Self," *Diacritics* 12. 2 (Summer, 1982): 2-10.

Just as the text it thematically revisits is about the mythological aspects of creation in the context of bibliogenesis, of birth and of the Romantic ideas of artistic creation, so Jackson's hypertext is a metafictional narrative about what constitutes the act of writing.

Another telling example of intertextuality is the title of the hypertext (see Figure 12). Jackson appropriates the name of the monster from the novel *The Patchwork Girl of Oz*, the seventh book in the series for children about the magical land of Oz by L. Frank Baum. In this novel he creates the character of Scraps, a rag doll, who becomes the Patchwork Girl. In the place of the subtitle of Mary Shelley's original text, *The Modern Prometheus*, Jackson offers the less definite, generalizing, and ironic, *A Modern Monster*. The play with the names of the author suggests collaboration in authorship and intertextuality that is inherent to the writing of hypertext.

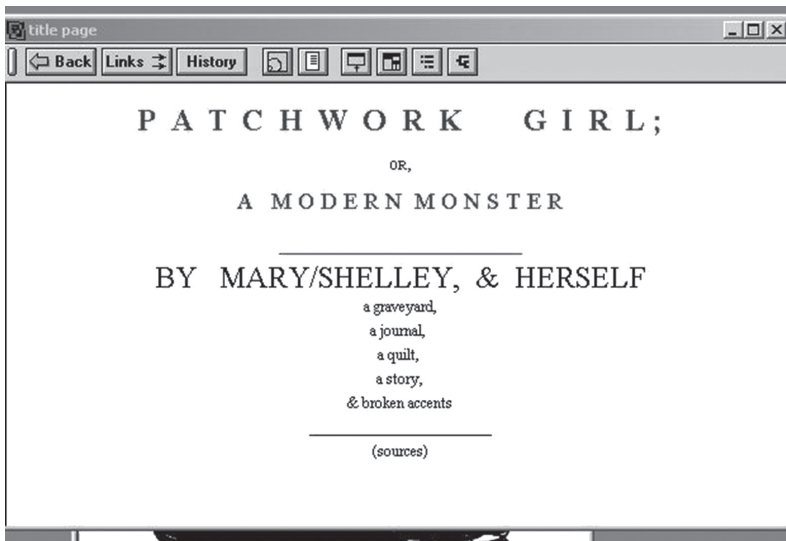


Figure 12. The title page of *Patchwork Girl*

The title page is suggestive of the many ways in which this hypertext can be read. It professes that this is a collaborative work of fiction, created by "Mary/Shelley and Herself". Thus it subverts

not only the source texts, but also the creation of the hypertext itself. Jackson often deludes the reader not only as to who the narrator is, but as to who authors this text, since the monster, Mary Shelley, and Shelley Jackson all appear as writing subjects at different times. Even the text seems to be writing itself, as the monster emphasizes: “Mary writes, I write, we write, but who is really writing? Ghost writers are the only kind there are” (PG, “Am I Mary?”).

This peculiarity of the hypertext does not allow a singular tyrannical voice to preside over the story. The voices of characters and narrator/s are so arranged within hypertext as to be truly polyphonic in Mikhail Bakhtin’s terms. Different voices mingle, split, and merge again, contributing to the final effect so that the reading of such fiction is defined by “the interaction of several consciousnesses, none of which entirely becomes the object of the other” (Bakhtin 1984 18).

Among the many examples of the metafictional commentary in the hypertext is the sustained metaphor of sewing, which reappears in several key episodes in the text, for example at the time of the monster’s creation as a patchwork of body parts. “At first I couldn’t think what to make her of. I collected bones from charnel houses, paragraphs from *Heart of Darkness*, and disturbed, with profane fingers, the tremendous secrets of the human frame, but finally in searching through a chest in a solitary chamber, or rather cell, at the top of the house, I came across an old patchwork quilt, a fabric of relations, which my grandmother once made when she was young” (PG, “Crazy quilt”).

A series of lexias associate sewing with writing. In this manner Jackson links the process of the creation of the monster and the text. Mary Shelley writes in her journal: “I had made her, writing deep into the night by candlelight, until the tiny black letters blurred into stitches and I began to feel that I was sewing a great quilt” (PG, “Journal/written”). This is linked to the lexia “sewn,” where there is a further broadening movement from the mundane housewifery act of sewing to the creation of a form of life – her novel and the creature: “I had sewn her, stitching deep into the night by candlelight, until the tiny black stitches wavered into script and I began to feel that I was writing, that this creature I was assembling

was a brash attempt to achieve by artificial means the unity of life-form" (PG, "Journal/sewn").

In a similar fashion Mary Shelley, the author who writes, also appears as a character in the fiction by Shelley Jackson. Once again the metaphor of sewing resurfaces in the patching-of-the-skin episode. As Mary and her progeny have become intimate, they decide that each would lift a piece of her own skin and sew it onto the other's leg. This act is as much a metafictional comment, as it is an allusion to the discursive imaginings of the body, constructed through the writing spaces: "I wonder if I am writing from my thigh, from the crimp-edged pancakelet of skin we stitched onto me [...]" (PG, "Story/rethinking/Am I Mary").

But Jackson is not satisfied. She complicates the analogy further by adding surgery, as another example of the act of suturing, and a typically male one, especially as regards the late 18th and early 19th century (indeed, quite as much as the act of writing was a predominantly male occupation at that time). "Surgery was the act of restoring and binding disjointed parts. [...] Being 'seam'd with scars' was both a fact of eighteenth-century life and a metaphor for dissonant interferences ruining any finely adjusted composition" (PG, "Body of Text/mixed up/seam'd"). Part of this lexia is quoted (or the other way round, depending on their order of reading) in the "Crazy Quilt" section of the hypertext, focusing especially on the features of the software program, Storyspace, used for the writing of *Patchwork Girl* and referring to the creation of the text: "You may emphasize the presence of text links by using a special style, color or typeface. Or, if you prefer, you can leave needles sticking in the wounds – in the manner of tailors – with thread wrapped around them. Being 'seam'd with scars' was both a fact of eighteenth-century life and a metaphor for dissonant interferences ruining any finely adjusted composition" (PG, "Crazy Quilt/seam'd").

Reading hypertext requires a continuous alteration of the connections between the various segments of the text, which have already been visited in the process of reading. Images, events, contexts suggested by the text, are constantly revised. Hypertext achieves this destabilization of the fictional world primarily through structure, through its inherent fragmentation, discontinuity

and instability. In addition, these features of cyberliterature have the effect “of interrupting and complicating the ontological ‘horizon’ of the fiction, multiplying its worlds, and laying bare the process of world-construction,” as McHale observes, with regards to the postmodernist play with form (1991 112). In this way hypertext forms a continuation and not a disruption with the narrative strategies of print.

The basic distinctive feature, which sets hypertext apart from the experimental proto-hypertext that precedes it, is a function proceeding from the technological medium. It is the very medium – the computer – that plays the formative part in the construction and reception of this fictional work. In my view, the radical instability of the hypertext narrative reflects the dimensions of self-doubt and the fact that humans metamorphose into multiple personalities. Thus the dispersal of textuality in cyberspace reflects a subject that is decentered.²²

2. The Human Body

The flesh-eating 90's have brought about the desire for the disappearance of the body (Kroker and Kroker, 1996 139). Jackson realizes that the body has been banished, because “[t]he real body, which we have denied representation is completely inimical to our wishful thinking about the self. We would like to be unitary, controlled from on top, visible, self-contained. We represent ourselves that way, and define our failures to be so, if we cannot ignore them, as disease, hysteria, anomaly” (1998a). Despite the constant strive to normality, integrity and wholeness, the body, which “could be said to be the writing of the soul” (PG, “Body of Text/body”), is often ailing and deviant. Jackson's preoccupation with the portrayal of monstrous and imperfect images of the body is purposeful. Her female monster is pieced together “like a quilt” from multiple parts becoming a multilayered metaphor for body and self.

²² A similar idea is expressed in Silvio Gaggi's *From Text to Hypertext: Decentering the Subject in Fiction, Film, The Visual Arts, and Electronic Media* (U of Pennsylvania P, 1998) 111.

In some of the critical literature on this hypertext the *Patchwork Girl* has been discussed as a cyborg.²³ The cyborg as a metaphor can be applied to Jackson's fiction in the discussion of the themes of embodiment and subjectivity. Firstly, because of its hybridity and mutability the cyborg has become a useful metaphor for signifying embodiment in cyberspace. Secondly, since cyborgs are essentially borderline creatures, they illustrate the instability and liminality of human subjectivity in postmodern and posthuman times. Jenny Wolmark finds that: "The cyborg's propensity to disrupt boundaries and explore different embodied subjectivities could, therefore, be regarded as its most valuable characteristics" (6). For Shelley Jackson the cyborg's hybrid body is a metaphor not only for creating narratives, but for the posthuman condition of the subject.

The body is a patchwork though the stitches might not show.
It's run by a committee, a loose aggregate of entities we
can't really call human, but which look like lives of a sort...
[They] are certainly not what we think of as objects, nor are
they simply appendages, directly responsible to the brain.

(Jackson, 1998a)

The literature featuring cyborgs, on and about cyborgs has proliferated, as have the diverse manifestations of this constructed entity. Critical disputes have included such issues as who can be considered historically the first "original" cyborg. David Bell points out as one of the likely candidates Victor Frankenstein's monster, who however has no mechanical features.²⁴ Jennifer Gonzales expands the definition of the cyborg in a practical way. In her view "an *organic* cyborg can be defined as a monster of multiple species,

²³ This can be illustrated by the comments on *Patchwork Girl* by students of Landow's course on hypertext literature in the years 1996-1998 at Brown University. 20 Nov. 2002 <<http://www.cyberartsweb.org/landow/cpace/ht/pg/pglinks.html>>

²⁴ See David Bell, "Introduction to Cybercultures Studies" 149. Chris Baldick comments that Frankenstein's monster has no mechanical characteristics. See *Frankenstein's Shadow. Myth, Monstrosity, and Nineteenth-Century Writing* (Oxford: Oxford UP, 1987) 44-45. *Frankenstein* has been characterized as the first work of modern science fiction.

whereas a *mechanical* cyborg can be considered a techno-human amalgamation” (540). Jackson’s Patchwork Girl is a curious case of an organic cyborg.

In creating her organic cyborg, Jackson combines two powerful myths. On the one hand, “Mary Shelley [who] wrote a novel that became the quintessential modern myth, anticipating the nightmares of the century still to come,” (Jackson 1998b) and on the other, Haraway, who states that: “my cyborg myth is about transgressed boundaries, potent fusions and dangerous possibilities...” (1991 154). Realizing that the monster defines “the limits of community in Western imagination” (Haraway 1991 180), Jackson playfully incorporates and ironically subverts these two powerful myths. In this way she reinstates the fundamentality and materiality of the body.

However, in contradistinction to the majority of cyborgs, the Patchwork Girl is not a utopian creature, expecting to rise to mythical plains, neither is she an oppositional one. Jackson’s creature is not tragically lonely, ostracized by society. The Patchwork Girl accomplishes what Donna Haraway posits, namely that: “Unlike the hopes of Frankenstein’s monster, the cyborg does not expect its father to save it through a restoration of the garden; i.e. through the fabrication of a heterosexual mate, through its completion in a finished whole” (1991 151). Jackson’s character does not wish for a monstrous mate to complete it, and comes to realize how unfeasible any aspirations towards totality are.

Shelley’s and Jackson’s monsters can be concurrently construed as cyborgs as, according to Haraway, the cyborg is resolutely committed to perversity and monstrosity. As entities both are constructed and share the common features of hybridity and liminality. I apply the term hybrid in the meaning ascribed to it by Jennifer Gonzales (2000). It evolves from an early 17th century Latin usage of *hybridia*, meaning a cross-bred animal. Nowadays the word has acquired several meanings. It can be anything derived from heterogeneous sources or composed of elements of different or even incongruous kinds; bred from two distinct races, varieties or species. What makes the term controversial is that it assumes the existence of a non-hybrid pure state, with which it stands in

relation of contrast. Gonzales believes that heterogeneity must be taken as given, and calls for imagining a world of composite elements without the notion of purity. For her “the only useful way to employ the concept of the hybrid: as a combination of elements that, while not in themselves ‘pure’ nonetheless have characteristics that distinguish them from the other elements with which they are combined” (547).

Of great importance is her contention that: “The visual representation of a hybrid cyborg thus becomes a test site for possible ways of being in the world” (547). Gonzales finds that in the visual representation of cyborg bodies, especially organic ones, there is a general tendency to “link the ‘otherness’ of machines with the otherness of racial and sexual difference” (548). Words such as “miscegenation,” as well as metaphors of sexual reproduction (with specific reference to the female and the maternal bodies), and the images of monsters are used to emphasize the forbidden nature of the coupling between human and machine. They refer to the feelings of panic and curiosity which arise from the strangeness of new technologies.

Jackson attacks the somatophobia, associated with the ideal of the disembodied subject (typically a male), through her positive treatment of sexuality, reproduction and physicality in its most naturalist form. This merging of the naturalistic and the fantastical in her monster produces a body that is grotesque, but also likeable. The female monster contests the qualification “hideous progeny,” claiming that each individual part of her is beautiful, and moreover, it “is human and proportional to the whole. Yet, *I am a monster – because I am multiple*, and because I am mixed, *mestizo*, mongrel” (PG, “Story/severance/why hideous”, emphasis added). Jackson attacks through the image of her female monster the Western construct of nature as antithesis to culture, reason and masculinity. In other words, monstrosity itself is constructed by the discourses of science and technology in their attempt to subordinate nature.

Indeed Frankenstein’s monster in the original text is created by scientific experimentation, and as such exemplifies the fears and hopes engendered by technology. Victor embodies an obsessive attempt to master the secret of life, to rival God and women as

creators of life, to guarantee immortality. Thus he strives to place humanity in a position of mastery and domination over nature (Graham 64). This is precisely what the utopian posthumanists, who aim at transcendence and eternal life in digital form, envision. Victor's obsession with mortality, his manic quest to defy death, his striving for procreation, and his morbid isolation from life itself, resemble the urge for transcendence of the posthuman cyborg. Shelley criticizes not science, but scientific overreaching from an ethical standpoint (one cannot help but wonder what she would make of today's genetic modifications). Shelley also denounces the excessive sensibility, obsession, madness, uncontrollable ambition and guilt in the character of her Romantic male hero. In her portrayal of Victor Mary Shelley's text takes simultaneously an anti-Enlightenment and anti-Romantic position.

In the current discussion of posthuman subjectivity, as represented by the body of the cyborg monster, a comparison to Shelley's *Frankenstein* may lead to interesting conclusions.

The common ground for comparison between the print text and the hypertext fiction is mostly in the attitude of Shelley and Jackson, for both writers render their creations with sympathy, even compassion. In these organic cyborgs, animated through the means of science, the emphasis is on the human. Frankenstein's creature is made human by acquiring language and revealing his intellectual ability, which stands in stark contrast with his repulsive body, and also by being given a voice. He tells the story alongside the other two narrators: Victor Frankenstein and Robert Walton. Starting life as an innocent creature, by virtue of society's continual rebuttals and refusal to recognize in him a rational being, Frankenstein's creature is corrupted by those (including his creator) who ascribe to him a monstrous identity. By making his death tragic and sacrificial, Shelley actually indicts society and its standards as monstrous. A similar thought is expressed by Anne Mellor: "Mary Shelley saw the creature as potentially monstrous, but she never suggested that he was other than fully human" (*Mary Shelley* 63). Similarly, Jackson portrays her monster as human(e). At times the Patchwork Girl is bothered by the wonder and disgust that some show to her. Indeed her main reason to travel to America is the hope

of becoming whole, for in the “galvanized air” of the New World, the size of everything, including industry, farming, construction, the accumulation of money, is monstrous (PG, “Story/seagoing/America”). It is to America that the monster decides to go, because, as she states with irony:

There, where the shadows thrown by the radiant future, fall across the present and blot out the past, where everyone is going to be somebody, I felt a pleasant conviction that with money, friends, and luck, nobody had to be monstrous.

(PG, “Story/seagoing/America”)

Victor’s “hideous progeny” receives different appellations in the novel; he is a “monster,” “fiend,” “daemon,” “creature” and “wretch”.²⁵ No matter what the monster is called, he is never ascribed a personal (Christian) name, which on the one hand foregrounds his illicit beginnings, and on the other underscores his problematic identity. In contradistinction, Jackson gives a descriptive name to her monster. Patchwork Girl, while referring to her genesis, actually reinforces her dubious ontological status. The inclusion of parts of a cow in her body interrogates her status as human; the inclusion of both male and female parts renders her gender status vague. In addition, being a patchwork of others, she is actually a congregation of identities, and so can be interpreted most generally as “every person”. For Laura Shackelford, too, the Patchwork Girl “exhibits the transgender, transnational and transracial features associated (since Haraway) with cyborg identity” (88). However, Shackelford adds another dimension to the possible interpretations of the female monster. She claims that the lexia “phrenology” refers to “the emergent postcolonial cyberpunk” (88), for it suggests “the ‘scientific’ method to qualitatively measure the human body of African-Americans and other subalterns, and thus partakes in discourses of racial and sexual objectification” (89).

Similarly, Shildrick maintains that monsters “speak to both radical otherness and to the always already other at the heart of

²⁵ As mentioned in Baldick (1995 48).

identity. Like the feminine, they carry the weight not just of difference, but of *différance*” (3). So Jackson’s work is informed by a more positive, though by no means techno-deterministic or utopian view of science. By normalizing the monster Jackson abates technological fears and anxieties. In this context it is important to stress that the Patchwork Girl is not the only deviant body in this hypertext. On her voyage she encounters Chancy, the sailor, who later turns out to be a woman. The Patchwork Girl also befriends a man who used to work in a freak show at a circus, having been made a freak when a tail was artificially added to his body. Her pet, too, is an ancient armadillo, and again is out of the ordinary. Jackson recurses even to ‘celestial bodies’ to illuminate her message, by stating that the classical wholeness and taxonomic self-knowledge of angels has become outdated, that monsters are fallen angels, “cross-bred, cross-dressed, cross-referenced” (PG, “Body of Text/bad dreams”). Thus the deviant body, including the categories of the monstrous, disabled and grotesque, has a similar function.²⁶ It stands in a position of negative polarity, in order to keep repressing the fragmented body and keep generating the body image of the whole and coherent self.

Despite the fact that there are common features between Jackson’s and Frankenstein’s monster, the organic cyborg in *Patchwork Girl* differs significantly from its posited predecessor. Robert Anderson stresses the differences between the pre- and postmodern monsters. He finds that: “In *Frankenstein*, the creature represents a blurring of the distinction between man and monster, between nature and science and of gender categories themselves” (n.p.). It is actually this blurring of the boundaries of gender and sexuality that is monstrous. In Shelley Jackson’s interpretation the blurring of these boundaries is not seen as something horrible. Hence the pertinent

²⁶ I refer here to Bakhtin’s description of the grotesque, which “ignores the impenetrable surface that closes and limits the body as a separate and completed phenomenon. The grotesque image displays not only the outward, but also the inner features of the body: blood, bowels, heart and other organs. The outward and inward features are often merged into one.” M. Bakhtin, “The Grotesque Image of the Body and its Sources”, *The Body: A Reader*, eds. Mariam Fraser and Monica Greco (New York: Routledge, 2005).

question: “Is it possible that the modern Gothic monster pre-figures the post-modern science-fiction cyborg, the significant difference being that the monster is reviled and the cyborg is celebrated?” (Anderson n.p.). Jackson answers affirmatively.

Monsters are spectacles of abnormality, “excluded and demonized” (Graham 39), for their aberrant bodies are corporeal manifestations of sinful acts, usually the product of the breach of some moral law. When commenting on the origin of *tera* – the Greek word for ‘monster’ – denoting simultaneously an abhorrent and attractive entity, Graham suggests that the monstrous body is pure paradox (53). “It is both a sight of wonder – as divine portent – and loathing, as evidence of heinous sin. The monster is both awful and aweful, and insofar as the monster synthesizes taboo and desire, it further articulates its ambivalence for its creators” (Graham 53).

The traditional theological reading of the monstrous has received a significantly different interpretation in Mary Shelley’s gothic story. Writing from a feminist perspective, Sandra Gilbert and Susan Gubar have opted for an interpretation of Victor Frankenstein as the “monstrous Eve,” after discussing the more familiar ways of analyzing Victor as Adam, or as Satan in the context of Mary Shelley’s rewriting of Milton’s *Paradise Lost*.²⁷ Victor Frankenstein not only appropriates the role of God, the creator, but also that of a woman’s womb. In other words, it is Victor Frankenstein who transgresses the boundaries between the male and the female, and it is this, according to Robert Anderson, more than the monster himself, that horrifies Victor. Graham also concludes that the primary monstrosity in the text resides in Victor’s “necrophilic personality” (83).

For Shelley Jackson the monster is even further removed from the stereotypical theological casting. In Jackson’s “rewriting” of the Frankenstein myth the relationship between the maker and the creation is completely changed. The story is feminized on several levels. The fact that it is a woman “giving birth” to the monstrous creature normalizes the act of the creation of the Patchwork Girl.

²⁷ See Sandra M. Gilbert and Susan Gubar. “Horror’s Twin: Mary Shelley’s Monstrous Eve,” *The Gothick Novel*, ed. Victor Sage (London: Macmillan, 1990) 150-163.

Though the monster can be interpreted as transsexual since it combines body parts from both sexes, its most “conservative organ” is definitively female. Furthermore, the female creator gradually comes to accept her creation, her baby. Having created her progeny, Mary soon realizes that though she has made its skin multicolored, by virtue of the many patches, it reminds her of the autumn foliage in its myriad differing hues, i.e. she acknowledges that her creation is beautiful, what is more – that it is natural (PG, “Journal/she stood”). In addition, Jackson’s and Mary’s views stand in stark contrast to the way the original Patchwork Girl of Oz is treated in Frank Baum’s fairy-tale of the same title, for she is made out of an old patchwork, also referred to as crazy quilt, precisely so she will not be too beautiful and hence too dignified.²⁸

Mary Shelley as a character in the hypertext at first feels sympathy, compassion, and then love for the monster that includes an erotic aspect, both lesbian and incestuous.²⁹ Still, she describes the conflicting emotions in a true romantic fashion: “I felt variegated emotions churning in my breast: tenderness, repugnance, fear and profound responsibility, both anxious and prideful” (PG, “Journal/meeting”). It is this prideful responsibility of Mary’s that distinguishes her attitude in the most radical way from that of Victor and contributes to the normalizing of the monster.

In a moving scene, described in three successive lexias – “Story/severance/Mary,” “surgery” and “join” – this total acceptance of the creation by its creator is represented by the aforementioned

²⁸ “Sometimes it is called a “crazy-quilt,” because the patches and colors are so mixed up. We never have used my grandmother’s many-colored patchwork quilt, handsome as it is, for we Munchkins do not care for any color other than blue, so it has been packed away in the chest for about a hundred years. When I found it, I said to myself that it would do nicely for my servant girl, for when she was brought to life she would not be proud or haughty, as the Glass Cat is, for such a dreadful mixture of colors would discourage her from trying to be as dignified as the blue Munchkins are.” F. L. Baum, *The Patchwork Girl of Oz*. The Online Literature Library. 23 Jan. 2001 <<http://www.literature.org/authors/baum-l-frank/the-patchwork-girl-of-oz/>>

²⁹ The following lexias can serve as an example of her sexual attraction and love: “I crave her company, I crave even the danger” (“Journal/crave”) and “Last night I lay in her arms, my monster, and for the first time laid my hand on her skin” (“Journal/I lay”).

exchange of patches of skin and grafting them onto each other's bodies. For this purpose the monster, whose skin does not, strictly speaking, belong to her, selects "a place where disparate things joined in a way that [is her] own" (PG, "Story/severance/join). Meanwhile, Mary chooses a spot on her lower calf that "Percy would likely never miss" (PG, "Story/severance/join). By virtue of this skin grafting the merging of creature and creator becomes total, again indicating the normalizing of the monster. This is followed by the confession: "So I remember when I was Mary, and how I loved a monster, and became one. I bring you my story, which is ours" (PG, "Story/severance/us").

By making her monster female, Jackson paradoxically succeeds in subverting the 'tradition' of linking monstrosity with femininity. The monster is "a transhistorical site of challenge to the rational, autonomous, masculine subject, and to the category of the human itself" (Shildrick 1996 9-10). To generalize, as Rosi Braidotti does, in cultures where human nature is equated with characteristics perceived as typically male, the female is "that which is other than... whatever the norm may be" (80).

Jackson further elaborates on the association between the monstrous with the feminine by incorporating parts of the text written by Baum. His character is a living doll, made of patchwork,³⁰ with button eyes, a felt tongue, pearl teeth, brought to life by a magician by means of his Powder of Life formula. She has in some ways a fate similar to that of Shelley's monster, as she is at first ridiculed and laughed at by the other characters of the book. One such example is the following rhyme quoted by Jackson: "Said the owl in a grumbling voice: Patchwork Girl has come to life/ No one's sweetheart, no one's wife/ Lacking sense and loving fun/ She'll be snubbed by everyone" (PG, "Crazy quilt/no one's wife"). She is also made fun of for being misconceived, for being an irregularity, an abnormality. Indeed the Patchwork Girl of Oz is continuously criticized for being ugly, even horrid, and purposely made this way,

³⁰ "There were almost too many patches on the face of the girl for her to be considered strictly beautiful, for one cheek was yellow and the other red, her chin blue, her forehead purple and the center, where her nose had been formed and padded, a bright yellow." F. L. Baum, *The Patchwork Girl of Oz*. (n.p.)

so as not to put on airs. To this she replies that she hates dignity. In addition, as the Patchwork Girl in Baum's fairy-tale is created to be a humble servant, she is not expected to be either clever or beautiful, as then she would be unhappy with her position:

"Has she any brains?" asked Ojo.

"No; I forgot all about the brains!" exclaimed the woman.

"I am glad you reminded me of them, for it is not too late to supply them, by any means. Until she is brought to life I can do anything I please with this girl. But I must be careful not to give her too much brains, and those she has must be such as are fitted to the station she is to occupy in life. In other words, her brains musn't be very good."

(Baum n.p.)

Jackson comments ironically on the many-brains theme in a series of lexias all entitled "beauty patches" within the section "Crazy Quilt". Here she attacks the Western stereotype of female perfection. Jackson's monster surrounds herself by images of perfect bodies, pinning up the photos of models and actresses, and tries to master the craft of creating herself whole, by finally coming to realize in a Lacanian fashion that chasm separating ideal body image from the real. "My actual body was craggy, sprouting, leafy, crumbling. My imagined body was utterly smooth" (PG, "Story/falling apart/craft"). This urge to remain whole, unified and non-striated is expressed through the dominant conceptions of otherness in the lexias entitled "passing" and "diaspora". By referring to the marginalized groups of the light-skinned blacks who aspire to pass for white in America so as to avoid being discriminated against, and of the refugees and immigrants, Jackson enforces the awareness of her character's cleft identity, as she does in the portrayal of her dismembering body. Another example of the composite nature of corporeality and selfhood is the following paragraph, built on imagery from bioscience. "The body as seen by the new biology is chimerical. The animal cell is seen to be a hybrid of bacterial species, like that many-headed beast, the microbeast of the animal cells combine into one entity, bacteria that were originally freely living, self-sufficient and metabolically distinct" (PG, "Body of text/bio").

In contrast to her fictional predecessor, Jackson's monster arouses not only fear but desire too. Though deviant, her creature has the potential to love and be loved. In this way Jackson normalizes the "monstrous" image of the body. She finds that: "What we image is all that animates us, not just texts, but also people. A beaker of imaginal secretions makes us all desire's monsters, which is what we ought to be" (1998b). Jackson refers to our biological sameness, our common corporeality to reinstate that the boundaries between self and other are illusory ones, when her monster reminds us: "Keep in mind on the microscopic level, you are all clouds. There is no shrink-wrap preserving you from contamination: your skin is a permeable membrane ... If you touch me, your flesh is mixed with mine, and if you pull away, you may take some of me with you, and leave a token behind" (PG, "Body of text/hazy whole").

The myth of Frankenstein is reinterpreted by Jackson as the possibility of building one's identity from imprecise elements and fragments of often unknown origin. The monster explains: "I am a mixed metaphor. *Metaphor*, meaning something like "bearing across," is itself a fine metaphor for my condition. Every part of me is linked to other territories alien to me but equally mine" (PG, "Body of text/metaphor me"). As a result Jackson's female monster differs not only from its male predecessor, it also departs from the habitual treatment of cyborgs in fiction in relation to their corporeality. Unlike her tragic and victimized male counterpart, the Patchwork Girl reveals not romantic angst, but an existential lightness. At times she also hopes for integrity and wishes to deny her monstrous past. By resorting once again to the metaphors of cutting and stitching, intertwined with those of writing in the digital environment with the techniques of "cut and paste" in a lexia bearing the same title, she concludes: "Maybe my mistake was believing I could pull myself together with the instruments of surgery, scissoring out anomalies, cut and paste a past. But I thought I could grow into oneness" (PG, "Story/falling apart/cut and paste").

Her realization, though, that this is an existential impossibility is presented humorously. For instance, she labels her body parts in a comic manner by referring them to their genesis. So she has the tongue of Susannah, a talkative pub woman; the ears of Flora,

which overhear secrets; the nose of Geneva, which gets her into “tight” situations; and the stomach of Bella, a glutton who was in her lifetime tried for crushing a man and who, oblivious to her fate, nibbled her way to the gallows. She has a male liver from Roderick, while her intestines are a contradiction, having been taken from regular Mistress Anne, the maidservant, and Bossy, the cow. Her hyperactive left leg, which has “had enough of waiting,” undergoes a series of misfortunes on its own and needs to be replaced (PG, “left leg”). What the reader gets as a result is by no means a fearsome monster, but a grotesque parody of one. Through the course of her narrative, recounted in the “Story” section, the monster treats her disintegrating body with humor and, finally, acceptance.

When I bathed, I sat in the steaming fragrant bathwater amidst the warm nudging bodies of my vagrant parts. They seemed companionable, they seemed to have personalities of a rudimentary sort, like small agreeable dogs. At times, my vision clouded by steam, dimmed in the candle-light, I would regret the rigor of my convictions and lie back in the warm water and they would nestle about and on me. But when the water cooled I set to work pragmatically with tape and scissors, like a nurse.

(PG, “Falling Apart/more partings”)

In addition, Jackson’s monster partakes of the experience of the postmodern sublime. Unlike the Romantic sublime for the postmodern and posthuman this emotion is caused by the contemplation not of nature, but of technology.³¹ The sublime in postmodern culture aims at representing what is unrepresentable, i.e. concepts that have no correlatives in the natural world such as the cyborg and the posthuman. For Lyotard “the experience of the

³¹ For more on this issue see Joseph Tabbi, *Postmodern Sublime: Technology and American Writing from Mailer to Cyberpunk*. (Ithaca: Cornell UP), 1995. Lyotard has defined the sublime as a key concept in postmodern criticism. It is “a combination of pleasure and pain: pleasure in reason exceeding all presentation, pain in imagination or sensibility proving inadequate to the concept.” Jean-Francois Lyotard, 1993 15.

sublime feeling demands a sensitivity to Ideas that is not natural but acquired through culture” (71).

Ognyan Kovachev claims that in the literature appearing in cyberspace, just as in gothic literature, the monster – a hybrid of organic and inorganic matter, of human and animal – incorporates the aesthetics of horror, which encourages the self-examination of the human, mediated through the text. Kovachev finds that in the analysis of the literature in cyberspace, the critic needs to examine “how the fact that the inorganic can become (like) the organic serves to inspire the sublime” (334).³² The *Patchwork Girl* seems to rekindle this sublime feeling in the reader, but Jackson has her do so playfully, with humor.

As regards the conceptualization of subjectivity in this hypertext a useful reminder is Haraway’s description of the cyborg as “a kind of disassembled and reassembled, postmodern collective and personal self” (1991 163). In a similar manner, multiple and fractious identities find various manifestations in *Patchwork Girl*. One such recurrent metaphor, already analyzed as regards its role in the textual body, is that of the dotted line.

The dotted line is the best line.

It indicates a difference without cleaving apart for good
what it distinguishes.

It is a permeable membrane: some substance necessary
to both can pass from one side to the other. [...]

A dotted line demonstrates even

what is discontinuous and in pieces can blaze a trail.

(PG, “Body of Text/dotted line”)

The metaphor of the dotted line resurfaces towards the presumable “end” of the story (though any ending of a hypertext is determined by the subjective feeling of closure of each individual reader). “I hop from stone to stone and an electronic river washes out my scent in the intervals. I am a discontinuous line, a dotted line” (PG, “Body of Text/hop”). Lines appear visually in several of

³² The translation is mine.

the graphics incorporated in the text – the images of female bodies (the drawings “hercut2”, ‘hercut3” and “hercut4”), either whole, crisscrossed with dotted lines or completely dismembered, torn apart by the same line.

The dotted line, textually and visually rendered, has the main function to signify cleft subjectivity. By not being a complete (full) line, it is experienced more as a potentiality. On paper dotted lines are used to indicate sections that need to be folded or cut. Thus in the hypertext they suggest simultaneously the act of rupturing and the movement from a flat surface to three-dimensionality.³³ This I also interpret as the act of imagining a transmutation of the dead and/or of the inorganic into a form of life. The dotted line denotes the scars on the body of the monster and as such it symbolizes pain, rupture, dismembering. It also refers to the act of stitching together of the various body parts and so signifies the act of assembling, of suturing. As Jackson notes, ruptures both “mark a cut” and “commemorate a joining” (PG, “Journal/scars/cut”). In addition, the dotted line is the line of the merging of organic (and inorganic) bodies, as it “signals the dangerous potential of the monstrous text/body to disrupt traditional boundaries in a border war where the stakes are human identity” (Hayles 2000 n.p.).

Another revealing example of the instability and multiplicity of postmodern subjectivity is a critical point in the story when the monster begins to fall apart – her body parts literally start to fly in different directions. It is through the help of Elsie, the woman who previously agreed to sell the monster her past, that the Patchwork Girl is saved. The monster makes a significant discovery:

I was gathered together loosely in her attention in a way that was interesting to me, for I was all in pieces, yet not apart. I felt permitted. *I began to invent something new: a way to hang together without pretending I was whole.* Something between higgledy-piggledy and the eternal sphere.”
(PG, “Story/ falling apart/ I made myself over,”emphasis added)

³³ The latter interpretation has been suggested by K. Hayles, *My Mother Was a Computer* 149.

This portrayal of the disintegrating body one can easily associate with the Lacanian view that for the infant the body is an assemblage of arms, legs and surfaces. In a similar fashion Jackson focuses on portraying images of the radically disintegrating body as an assemblage of body parts and organs. Just as the child misrecognizes the mirror image as a unified whole, thus assuming the armor of “an alienating identity” (Lacan 4), so Jackson’s main character strives after totality, at least in one of the possible readings of the text. However, she soon realizes the impossibility, the incongruity of such a desire, and resigns herself, but with humor, to the inevitability of the chaotic body and fragmented self.

In the final analysis, Jackson’s portrayal of the body approximates Haraway’s posited vision of the potential role of the cyborg: “From one perspective the cyborg world is about the final imposition of a grid of control on the planet [...]. From another perspective, a cyborg world might be about lived social and bodily realities in which people are not afraid of their joint kinship with animals and machines, not afraid of permanently partial identities and contradictory standpoints” (Haraway 1991 154). Though her main character is a monster, the dispersal and multiplying of identity is not seen as monstrous by Jackson, but as an acceptable and even normalizing experience. The final message carried by the image and metaphor of the hybrid subjectivity of the cyborg is that the only chance for individual coherence is not striving towards unity and balance, but accepting one’s multiplication. As Hayles states: “the text not only normalizes the subject-as-assemblage but also presents the subject-as-unity as a grotesque impossibility” (2000 n.p.).

The dispersal of the “schizophrenic” multiple personality represented as a cyborg is related to the question of human memory in postmodern writings and theory, and in the writings on posthumanism too. In many science fiction films and books featuring cyborgs, at a certain point the prosthesis acquires a consciousness and a memory. This scenario can be found in *Blade Runner*, *The Terminator* and *The Matrix* series. However, no grand collision takes place in *Patchwork Girl*, for the issue of the past is treated quite humorously. The monster experiences serious problems when her various body parts, which preserve the memories of their

previous owners, each demonstrating his/her own individual traits, at different points of the story decide to go their own way. Thus, in the lexia “Graveyard/the everywoman monster’s left leg” the monster describes how that limb:

belonged to Jane, a nanny who harbored under her durable grey dresses and sensible undergarments a remembrance of a less sensible time: a tattoo of a ship and the legend, Come Back To Me. Nanny knew some stories that astonished her charges, and though the ship on her thigh blurred and grew faint and blue with distance, until it seemed that the currents must have long ago finished their work, undoing its planks one by one with unfailing patience, she always took the children to the wharf when word came that a ship was docking, and many a sailor greeted her by name.

My leg is always twitching, jumping, joggling. It wants to go places. It has had enough of waiting.

(PG, “Graveyard/the everywoman monster’s left leg”)

Cyborgs, monsters included, being artificially constructed, are by definition parentless. Most of the characters in Shelley’s *Frankenstein* are connected to each other, as well as to the author, through a common condition of orphanhood. This lack of a past or even the denial of any past is often perceived as common to our postmodern condition of the disintegration of totalizing narratives. However, Jackson insists on reinstating the “humanity” of her monster, for the Patchwork Girl longs for a past of her own and makes an illuminating discovery. Repeating several times that what she has gone through in her life was almost a resurrection, and then correcting herself that she is “not a resurrection, but a made thing” (PG, “Body of Text/resurrection/botched bro”), she realizes that memories of one’s past are related to one’s own integrity and individuality. “Lacking a past altogether, though, wasn’t safe. It was too easy to slide around on that glossy Arctic surface that held so many reflections and released them just as easily. I wanted a past with abundant nooks and textures, impossible to slip on or fall through” (PG, “Story/falling apart/cut and paste”). Her desire to acquire a past is part of her struggle to become whole.

At the same time she realizes how relative any concept of unity and past are, and that they depend largely on an individual's perspective on time. As regards history the monster writes:

I am in a here and a present moment that has the history and the expectations for the future. Or rather, history is only a haphazard hop-scotch through other present moments. How I got from one to the other is unclear. Though I could list my past moments, they would remain discrete... hence without shape, without end, without story. Or with as many stories as I care to put together.

(PG, "Body of text/this writing")

To this she adds: "The present moment is furiously small, a slot, a notch, a footprint, and on either side of it a seethe of possibility, the dissolve of alphabets and of me"

(PG, "a slot, a notch").

Shelley Jackson's goal is not only to normalize the monstrous, but in various ways to foreground the materiality of the body. A quite unforgettable and vivid example of this is the lexia "Body jungle," which describes the dream of the monster walking through a jungle full of human organs inside a body. She is walking through intestines, ribs, pelvic crests and ovaries. In her dream the Patchwork Girl describes the process of aging and death in the following manner:

Before long the blood in my veins will be the blood of the body jungle. My skin will fall away in scrolls, my palms and fingertips will drift down like aged leaves. My veins will unweave and reweave themselves into the network. My heart will swing free from my ribcage and roost on a branch [...] I do not know how my skull will open, or if, I will still know myself when my brain drifts up to join the huge, intelligent sky.

(PG, "Story/falling apart/body jungle")

Death in this passage is equaled to disembodiment. The identity of the subject, no matter how problematic, is intrinsically connected to the body. The very possibility of being and knowing oneself is denied, if the body is “lost”. This focus on “the meat,” as has already been emphasized, is quite unusual in other fictional representations of cyborgs, both in writing and in film. For Jackson it is within the body that the self resides, through the body that everyone can be individually identified. For this reason Jackson insists on the materialist, not the abstract representation of corporeality. Yet her conception of the body is not uncomplicated, as for her “it is a field of sensations juxtaposed in space”; it is “simultaneous,” “unstable,” “a roving focus” (1998a). Jackson’s observations refer also to the Lacanian body image, which she describes as fragmented: “Its [the body’s] public image, its face is a collage of stories, borrowed images, superstitions, fantasies. We have no idea what the body ‘really’ looks like” (1998a). Her *Patchwork Girl* is as much a biological organism as it is an artificial construct – a posthuman organism.

To conclude, Jackson’s *Patchwork Girl*, though monstrous, is presented as an exclusively biological organism, invested with humanity, precisely on account of her posited monstrosity. Jackson insists on the ability of biological organisms to interact, to communicate. This connection founded on our shared corporeality is an opportunity that is denied to the main characters of Shelley’s *Frankenstein*, whose loneliness and lack of companionship is foregrounded as the common human condition. In contrast Jackson finds that:

We are inevitably annexed to other bodies, human bodies, and bodies of knowledge. We are coupled to constructions of meaning; we are eligible, partially; we are cooperative with meanings but irreducible to any one. The form is not absolutely malleable to the intentions of the author; what may be thought is contingent on the means of expression.

(PG, “Body of Text/ bodies too”)

Jackson intertwines textual and human bodies along the lines of content and expression, of body and soul, and reveals through

this sustained simile how artificial such constructed categorizations are. Furthermore, from the perspective of posthumanism Jackson's "meaty" representation of the monster is in line with Hayles' appeal not to forget about the flesh, for her dream of the future, as she admits, is not that of virtual disembodiment and total erasure of the mortal self. She re-inserts embodiment in the posthuman condition and thus opposes the nightmarish, futuristic visions of the extreme supporters of disembodiment.

Shelley Jackson rescues the body from oblivion, while at the same time she refuses to dehumanize her female monster. Physically the Patchwork Girl is a parody of the human form, but is still essentially a human form in its dispersed unstable self and its basic corporeality, declared universal by Jackson:

Likewise I shall fill the universe to bursting with flesh flesh
flesh if I want to. You will all be part of me. You already
are; your bodies are already claimed by future generations,
auctioned off piecemeal to the authors of the future
monsters. These monsters move among you already, buried
in your flesh [...]

I shall build a palace, a city, a planet of meat.

(PG, "Body of text/mixed up/universal")

Jackson's female monster, which I interpret as an example of the organic cyborg, is not despicable and feared. She portrays an anomalous, grotesque and monstrous body, but does not make it an abject one, in the general meaning of the word; on the contrary, she depicts it as lovable and loved. Through the image of the monster representing the pathological and the deviant, which serve to demarcate the boundary of the "normative" human, Jackson interrogates the validity of these categories. The author suggests through the sympathetic depiction of her cyborg monster that the human-machine merging is not fearsome, and is ultimately acceptable. She uses an incarnation of the posthuman to examine the implications of the creative powers of the human and the will to achieve transcendence. In addition, the organic cyborg by virtue of its hybridity and liminality is used in the hypertext to elaborate on

the problematizing and dispersal of subjectivity. Jackson explains her own agenda: “I don’t want to lose the self, only to strip it of its claim to naturalness, it’s compulsion to protect boundaries, its obsession with wholeness” (1998a)

Jackson insists on the primary significance of embodiment in the representation and conception of the subject. She suggests the possibility of each person envisioning him/herself “as a posthuman collectivity” (1999 6), with the emphasis on *human*. In multiple ways Jackson’s female monster articulates this historical and cultural reconfiguration of the human being. Thus Jackson’s organic cyborg embodies the “contradistinctions that do not resolve into a larger whole, [...] the tension of holding incompatible things together because both or all are necessary and true” (Haraway 1991 149). The posthuman as monstrous organic cyborg deconstructs the watertight categories of ‘normative’ humanity, suggesting that we are all ‘fuzzy humans’ with ‘permeable boundaries’ and ‘cleft subjectivities.’

CHAPTER FOUR

RE/CONSTRUCTING THE EMBODIED SELF
IN CYBERTEXT: TALAN MEMMOTT'S *LEXIA*
TO PERPLEXIA

“Intelligent machines produce us even as we produce them.”

N. Katherine Hayles *Writing Machines*

“The internal nothingness
of my self

which is night,
nothingness,
thoughtlessness,

but which is explosive affirmation
that there is something to make room for
the body.”

Antonin Artaud

“To Have Done with the Judgment of God,
a Radio Play”

“I User, exit this for that—
sorted compartmentalized, archived.
RE:organized—stacked, a body with
organs elsewhere.
The de:parted body rests, no longer active/ on Blur;
0.0.0.0.0.0.0.0.0...”

Talan Memmott *Lexia to Perplexia*

“Double-Funnels/ Ka Space:
encryption >book< of the dead”

This chapter continues to explore how the body, self and machine constitute each other in cyberspace by focusing on the cyberliterature of Talan Memmott. The Web-based work of Memmott centers on the blurring, the obliteration of the ontological boundary between the posthuman and the computer, while emphasizing the dispersal of self through various bodily images, which also serve to demonstrate how indelible the body is even in the digital environment. The cybertext *Lexia to Perplexia*, published on the internet in the year 2000, foregrounds the radical polymorphism of the body through the corporealization of the image, the high visibility of the dissected body, which appears in the same space with bits of computer code and graphics of floating terminals. The loss of coherence of the human body has evolved in a metaphor for the dispersal of subjectivity in the current stage of technological culture and the body of *Lexia* is built on this sustained metaphor.

Memmott reiterates Jackson's perspective on humans not as stable, unified entities, but as cleft subjectivities residing in imperfect bodies. He complicates the issue further by purposefully interrogating the function of machine-body interaction and its role in the construction and expression of subjectivity. This complication becomes obvious, if a comparison is made with Pat Cadigan's *Synners*. Memmott renders his belief that humans and machines are intertwined and inseparable, i.e. he supports *the technogenesis of humans* and this becomes his central preoccupation. Hayles also finds that Memmott "imagines digital technology present from the beginning, with subjects and technologies producing each other through multiple recursive loops" (Hayles, 2004 292).

Memmott's cybertext can serve as an indication of the possible future trend in the development of cyberliterature in terms of the textual body, while treating the main issues regarding the human body: those of subjectivity and embodiment in cyberspace. It seeks to explore how the body can be situated in a world of irrevocable disintegration under disruptive socio-political and techno-cultural forces. The techno-anxiety of the current age has assumed neurotic proportions and emerges in the discordant discourses, the disjunctive form, the haphazard appearance of links, the seemingly chaotic assemblage of text and image in *Lexia*. Memmott succeeds in making the reader feel how: "the world has

accelerated” towards entropy (*Lexia* “Minifesto 3”).

In my view this cybertext succeeds in conflating the body as subject – the actual body of the individual reader – with the body as object represented on the screen. These two collide in the body as image, where the reader can see his/her own reflection in the mirror of the interface, and watch him/herself being watched back by the machine. In the two other major texts that I discussed in Chapters 2 and 3 respectively, the cyborg as a type of posthuman appears as a fictional character in a story. In *Lexia*, however, it is the reader, an actual human being, who in real time – in the process of performing this cybertext – is cyborgized, mostly by considering under the pressure of the text his/her literal fusion with the machine. The machine is anthropomorphized, as it takes the role of subject that gazes at the human and the human becomes the object that is gazed at.

In 2001 Memmott was awarded the trAce/Alt-X New Media Writing Award for *Lexia to Perplexia*, and he was one of five finalists for the Electronic Literature Organization’s award in fiction writing, one of the most prestigious prizes in the field. He is Brown University’s first graduate fellow in electronic writing. The result of the fellowship was a Master of Fine Arts degree in Literary Arts. He has been a tutor for the TrAce Online Writing School, as well as the creative director and editor of the online hypermedia literary journal *BeeHive* since 1998.¹ In 2003 at Brown University in Providence, Memmott developed the VR installation “Semiotic Oscillator,” which allows observers via projections on four sides (walls and floor) to navigate with stereoscopic glasses through virtual rooms. When reading about this project, I find that Pat Cadigan has been quite prescient in her description of VR paraphernalia and experiences in *Synners*, which have now become a reality. Coming from the fields of art, painting, and the theatre, with a rich experience in computer programming, Memmott creates original narratives with a language and imagery so far unique in the medium. As he acknowledges: “I came to writing through visual art but I always used writing in my visual art. [...] In many regards I am a media nomad.”²

¹ *BeeHive Hypertext/Hypermedia Journal*: 23 Oct. 2005 <<http://beehive.temporalimage.com>>

² Talan Memmott, “Active/onBlur: an interview with Talan Memmott” by

1. The Textual Body

Lexia to Perplexia is a textual experiment which comes close to Internet art. It is based on excessive fragmentation, where the author retains some control over the text with the aid of the machine, thus manipulating both text and readers in a manner not so subtle and in ways not possible for print literature. The content is not delivered through the act of straightforward reading, rather it is revealed as the user explores the object itself—its structure, coding, arrangement, imagery, interface, and text. It contests the point that cyberliterature achieves a liberating effect, as has been anticipated by many of its supporters. The power struggle between reader and author goes on. They should not be collapsed, even though their functions may have been transformed dramatically, where the former has become an engineer and the latter a user, and both are needed to operate the machine, so that the literary text can be performed.

All cybertexts of Memmott's, and *Lexia* is no exception, are marked by the outstanding features of multimedia: the visual and the computational. In the triad author-text-reader, Memmott accepts, just as Aarseth postulates in his theory of cybertext, a fourth participant – the machine as equal to the other three. The machine makes the author more of a designer of the text and a manipulator of the reader. In order to complete the interactive loop, the machine on its part is influenced by the choices the reader makes in the text, in the sense of what to 'allow' him/her to see or read next. Formally, the aesthetics of electronic expression reinstates the high visibility of the text, which contrasts with the visual poverty of the printed text. Indeed imagery is not complementary to the text or competitive with the text, but incorporates it as part of the extreme visualization of the screen, as already pointed out in the discussion of *Patchwork Girl* in Chapter 3. It is also multilayered, and at times the text takes the status more of an image to be perceived visually as part of the complex layout. In genre it is neither fiction nor criticism or commentary, but blurs the boundaries between fiction and non-fiction, creating a truly hybrid, postmodern text.

Mark Amerika. *TrAce Online Writing Center*. Jan. 2001. 23 Feb. 2005 <<http://tracearchive.ntu.ac.uk/newmedia/interview.cfm>>

Being unstable and neurotic, it seems that this cybertext can be experienced holistically, rather than dissected analytically. The high visibility and density of cyberliterature lead to a greater cognitive difficulty in perusing *Lexia*. The ‘noise’ of the text, especially on first visits, is overwhelming. In addition, often the seemingly random intrusion of pieces of text, graphics of eyes and mathematical algorithms block the information channel. After several reading sessions patterns start to emerge, which the reader begins to invest with meaning. Again as with the hypertext *Patchwork Girl*, it is entirely up to the individual reader to form connections – logical and associational – between the various linguistic, visual and mathematical signs offered on the screen. Consequently, the interpretation that follows is an outcome of my performing this cybertext as a reader/user undergoing intense cyborgization. I find some solace, though, that my reflections converge with those of several prominent analysts of *Lexia to Perplexia*, most notably with K. Hayles³ and Thomas Dreher,⁴ which reveals that this intensely incohesive cybertext can be interpreted in similar ways by different readers. Nevertheless, as Hayles points out, in true postmodern fashion, in *Lexia* “meanings are always unstable” and “totalizing interpretations are impossible” (Hayles, 2004 298).

The main themes outlined up-to-now are rendered not only on the levels of form and content, but specifically through the reader interacting with and experiencing the text. The reader is cyborgized, as s/he is made to explore his/her own sensations on performing the cybertext. The reader discovers that s/he need not be like the British professor of cybernetics Kevin Warwick, who had a silicon chip transponder inserted into his forearm, to become a cyborg. The chip allowed a computer to monitor Warwick’s movements throughout the university’s Department of Cybernetics and to perform simple

³ Hayles has contributed an illuminating analysis of this cybertext, published first as “Chapter 4. Electronic Literature and the Technotext: *Lexia to Perplexia*” in *Writing Spaces* (Cambridge, Mass: MIT Press, 2002) and later, with some revisions as “Metaphoric Networks in *Lexia to Perplexia*”, eds. Noah Wardrip-Fruin and Pat Harrigan, 2004. My quotes are from the latter.

⁴ Thomas Dreher “Talan Memmott’s *Lexia to Perplexia*” *Dichtung Digital* (2004). 15 Feb. 2009 <<http://www.dichtung-digital.com/2004/4-Dreher-engl.htm>>

actions instead of him, such as opening doors and turning on lights. Significantly, he states that he did not feel the chip as an alien particle, but quickly came to regard it as part of his body. Through the chip he was at all times connected and monitored by the computer in a “Big Brother” manner. Warwick testifies he developed a strong emotional attachment to the machine: “If I had to draw one conclusion from my experience it would be that when linked with technology inside my body, it is no longer a separate piece of technology. Mentally I regard such technology as just as much part of me as my arms and legs. If my brain was linked with a computer it is difficult to imagine where I would feel my body ended” (2003). His purpose was to investigate the possible dramatic influence of increased technological power. An issue that particularly concerns him is the potential for cyborgs to act against, rather than for, the interests of humanity. A subsequent experiment in 2002 including implants is described by Warwick in the following way:

Signals from my nervous system were transmitted across the internet from Columbia University, New York, to Reading University, UK, to move around a robot hand. The robot hand was directly controlled by my neural signals generated on another continent. Effectively my nervous system did not stop at my body’s limits but rather where the internet link concluded. (2003)

The 2002 experiment provided him with an extra ultrasonic sense that can be used in an important and compensatory way by people whose vision is impaired. The purpose of this voluntary act of cyborgization by the scientist was to examine the possible moral implications when the subject is changed by the linking of the human’s and machine’s function.

The reader realizes that in order to become a cyborg, s/he neither needs to be like the American Steve Mann, considered by some to be the founder of the field of wearable computing. In his more than 200 publications, Mann describes his merging with computer

devices, some of which he has worn for over 20 years now.⁵ As Mann is a strong advocate of privacy rights, he has tried to resist the imposition of technology on the individual through the method of *sousveillance* – a term he coined for “inverse surveillance”. Though his experiments and live performances do not include the implantation of technological components in his body, but its enhancement by various devices, he still raises similar issues concerning the control and autonomy of the subject as Warwick.

Mann proposes the concept of “Existential Technology” as “the technology of self-determination and mastery over our own destiny”.⁶ He suggests several examples of “in(ter)ventions,” i.e. inventions of his that could intervene with the monitoring technologies and surveillance practices of organizations that have made the individual vulnerable. In a series of performances from the mid-1980s onwards Mann used various apparatuses, some of which he did not even operate intentionally, to react to surveillance in supermarkets and airports with counter-surveillance. An example of his existential technology is the “wearcam” – wearing a photographic apparatus creating an “incidental” intervention. In his popular *Wearable Wireless Webcam* live performance on the Web from 1994 to 1996, his body could be remotely operated by others to take pictures. In such a way his body, complemented

⁵ Chris Gray describes Mann in his essay “Understanding the Postmodern Cyborg”: “In the summer of 1995 I visited MIT’s media lab and met a couple of grad students working on wearable computers and sophisticated human-machine interfaces who happily labeled themselves cyborgs. Steve Mann was connected to his computer through satellite signals and next to his head antenna he wore a camera that constantly broadcast images on two tiny TV screens he wore as glasses. He could set his camera to show everything upside down or sideways, which he had done to see how long it took his brain to adapt. Or he could set his camera for infrared and “see” the electrical cords in the walls, and even trace the power lines to hidden cameras in Harvard Square shops. Since he broadcast his camera output onto his web page this was something the shops didn’t appreciate so he was banned from several of them. Steve called his existence mediated reality, because everything he saw was mediated through his camera.” 21 Oct. 2006 <<http://www.routledge-ny.com/CyborgCitizen/cycitpgs/future.html>>

⁶ Steve Mann, *Existential Technology: Wearable Computing Is Not the Real Issue!* 23 Jan. 2006 <http://mitpress2.mit.edu/e-journals/Leonardo/isast/articles/2004excellence_nominees/Leo36-1_mann.pdf>

by wearable technology, was activated by the willpower of other humans, who could apply it for counter-surveillance purposes.

Or even less need the reader be like Stelarc, who transforms his own body so as to become a veritable cyborg. Plastered with electrodes, wires and antennas, he literally represents the body-machine hybrid, by enforcing the vision of humans as terminal beings whose obsolete bodies are to be discarded in favor of an augmented superior posthuman. In his performances Stelarc plays his body by amplifying its sounds, enhancing it by attaching a third prosthetic hand, or even roboticizing his hand by stimulating its muscles with electricity. But even Stelarc, who as an artist has developed “an aesthetics of prosthetics” and has become an “embodiment” of the posthuman cyborgian yearnings, acknowledges the deep connection between body, perception and intelligence – the idea of embodied intelligence, i.e. of intelligence as a function of the body. He admits, perhaps involuntarily, the primacy of the body believing that it is “the body’s physiological hardware that determined its intelligence, its awareness, and that if you alter this [hardware], you’re going to present an alternate perception”.⁷

Without attempting any of these three radical experiments with one’s own body, the reader is made to consider the validity and practicality of the posthuman perspective, as s/he is forced to assume the position of a cyborg, when performing and experiencing *Lexia to Perplexia*. The very way the cybertext is executed – its typography, layout, the elements of its composition, its kinetic characteristics – is instrumental in this process. The feeling of perplexity which overwhelms the reader and is suggested by the title, contributes to this. In other words, in this “narrative of informatic subjectivity,” Memmott’s work exemplifies “how our technologically saturated environment is in turn altering how we view ourselves as individual subjects” (Thacker 291).

The cybertext consists of four main sections that can be entered through the title page or through links within the cybertext. These four sections are: (1) “The Process of Attachment,” (2) “Double-funnels,” (3) “Metastrophe,” (4) “Exe.Termination.” As the title itself indicates,

⁷ Quoted in Mark Dery’s “Ritual Mechanics. Cybernetic body art,” *The Cybercultures Reader* 577-578.

this cybertext aims at providing lexias that ultimately confound the reader. Realizing how difficult he has made the cybertext for the reader to observe, read and interpret, Memmott challenges him/her in a straightforward manner: “pull the plug why don’t you” (“Minifesto 3”). The reader might be tempted at times to do just that for the cursor movement is hypersensitive to a state of neuroticism. New text appears and overlaps the previous one, pulsating animations and graphics of blinking lines and funnels at times eclipse the text, and make it entirely illegible (see Figure 13). This is how Memmott, assuming the position of the reader, describes the process:

With a document that is acted upon, unfolded, revealed, opened rather than read, full of holes to elsewhere, hiding secret inScriptions, filled with links like mines and traps and triggers – we are no longer talking page or screen, but appliance. Navigating the Lexia of *Lexia to Perplexia* is kind of like getting a new device and trying to figure out how the heck it works ...⁸

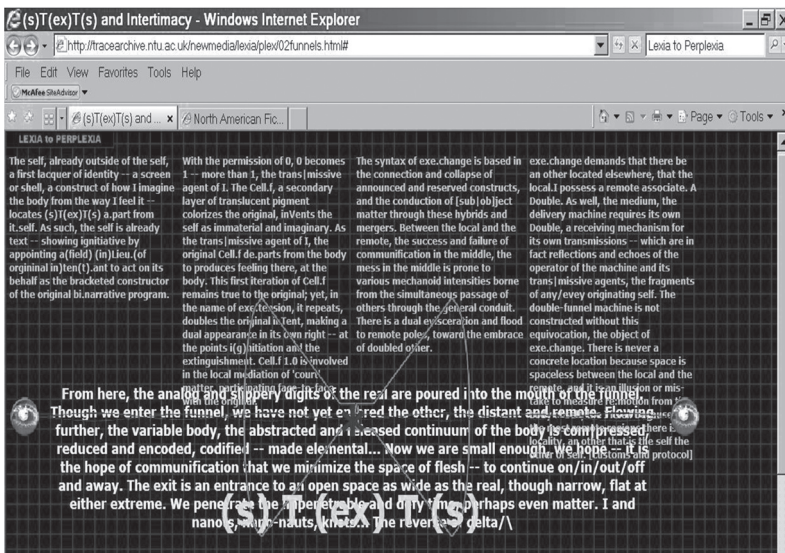


Figure 13. Talan Memmott *Lexia to Perplexia* “(s) T (ex) T (s)”

⁸ “Active/onBlur: an interview with Talan Memmott” By Mark Amerika

In a companion text to *Lexia*⁹ Memmott elucidates some of the major issues he raises: the dispersal of subjectivity, agency and identity, and the problematizing of dis/embodiment in cyberspace:

I tap out the terms with my fingertips, writing transmissive agents to do the dirty work for me.

I review the necessary documents, and issue commands to advance my electro-colonialism, depositing ID.entity elsewhere through the actions of my emerAgents. My clicks form cliques – exclusive sets of data that define me. At one location I consist of A:[a bracketed set of user information] at another I am constructed from B:[a bracketed set of user information]. From one domain to the next the ID.entity of my empire is different, altered and configured by my agents to appease the requirements of the foreign system. I am not 5’8” with brown hair when I am there. Identification is not dependent upon appearance or presence but upon the collective significations of my fragmentary Agents – I govern remotely. These agents, particles of {i} are dispatched deep into the netherworld to serve as diplomats for myself.

(“Opera/ Delimited Meshings”)

As already mentioned, *Lexia* is a fusion of theory, fiction and criticism, presenting to the reader a “text” that is highly abstract in content, marked by a heavy neologistic play, an intertextual collage of postmodern and deconstructive theory, and ancient myths. To complicate matters further, Memmott tries to examine the possibilities for developing new textual models by utilizing the evolving computer languages and codes – the potential of dynamic HTML and Javascript.

Memmott possesses significant technical expertise. He is also led by the firm conviction that the computer as a medium is different from the other media, so he tries to highlight its distinctive features. The title page of *Lexia* proclaims that this is a space of

⁹ Talan Memmott, “Delimited Meshings. A White Paper” 2001. 25 Jan. 2002 <http://studiocleo.com/cauldron/volume3/confluence/talan_memmott/delimited_meshings/meshings/0.html>

“Hypermediation/Ideoscope,” suggesting the multifarious nature of its form and content. It belongs to the second generation of cyberliterature, which is truly hypermedia, defined by the radical influx of the visual and the aggressive intrusion of the machine as a defining participant in the writing and reading acts. J. Bolter in the early days of writing in the digital environment focuses on the synaesthetic experience of hypermedia as its defining feature.

A hypermedia display is still a text, a weaving together of elements treated symbolically. Hypermedia simply extends the principles of electronic writing into the domain of sound and image. The computer’s control of structure promises to create a synaesthesia in which everything that can be seen or heard may contribute to the texture of text. These synaesthetic texts will have the same qualities as electronic verbal texts. They too will be flexible, dynamic and interactive; they too will blur the distinction between reader and writer.

(1991 27)

G. Landow on the other hand does not make an essential distinction between hypertext and hypermedia:

Hypermedia simply extends the notion of the text in hypertext by including visual information, sound, animation, and other forms of data. Since hypertext, which links a passage of verbal discourse to images, maps, diagrams and sound as easily as to another verbal passage, expands the notion of text beyond the solely verbal, I do not distinguish between hypertext and hypermedia. Hypertext denotes an information medium that links verbal and nonverbal information.

(1994 4)

In the current discussion of hypermedia, it is important to recall that the descriptions provided by Landow and Bolter were written at the dawn of digital technology’s application for writing and textual

experimentation. Critics could not foresee at that point in time the possible direction in technological development and what this would mean for creative writing. The evolution of cybertextuality is a reflection of the innovations in the technological medium. Still, it is Bolter who is more perceptive in realizing that hypermedia, be it cybertext, art installation or game, involves a synaesthetic experience for its viewer/user that engages the sensory apparatus ever more intensely and consequently reaffirms embodiment as indelible. Memmott also describes his work as literary hypermedia mixing text with graphics and animation. He draws attention to the three agents in this interactive process: “There is the (authorial) process of development, the processing (or computation) that occurs through interacting with the work as application, and the analytical (or sensorial) process for the reader/user. All three are important to consider in terms of hypermedia”.¹⁰

His work as cybertext represents one of the transitional forms between the Gutenberg and digital writing and reading spaces, moving in the direction of more radical experimentation. The main contribution of the theory of cybertextuality, as already explained at length in Chapter One, indisputably lies in the attempt to reconfigure the concepts of texts and readers, taking into consideration the medium used. Memmott succeeds not only in using the medium in a creative way, but in involving the reader in a meaningful relation with it. The most original way in which the reader/user can intervene in any cybertext is to alter it in terms of its content and form in ways not anticipated by the author/s. Thus far only a limited number of literary cybertexts can offer this possibility, mostly collaborative forms of fiction writing, which use open-source programs and various text generators.¹¹ Memmott’s work is a harbinger which

¹⁰ Talan Memmott, “The nEARness/t of [IrOny] U’s” An Interview with Talan Memmott on the occasion of the publication of “Self Portrait(s) [as Other(s)]” by Marjorie Coverley Luesebrink *Iowa Web Review* (2003). 6 June 2004 <<http://www.uiowa.edu/~iareview/tirweb/feature/memmott/interview.html>>

¹¹ There are numerous sites for text generators. See for example the following sites including random poetry generators: <<http://thinkzone.wlonk.com/PoemGen/PoemGen.htm>>, and <ww.poemofquotes.com/tools/poetry-generator.php>; or *The Discourse Engine – 6x6 Fiction Generator* <http://japicx.com/writers_workshop/discourse_engine/generators/blue_generator_frozen.htm> 22 Feb. 2007

indicates this tendency. In some cases the reader can perform, apart from the interpretative, the configurative function, but not the textonic, which would involve tampering with the deep structure of the text. Memmott does not give his readers this freedom.

I consider it important to mention that the cybertext *Lexia* has been created with a specific tool – Dynamic HTML (DHTML). It is used to create interactive and animated web pages. DHTML allows the designer to disrupt the flow of elements on a page as they would appear should they follow the order assumed for them in the static HTML. The elements can be taken out of the page and appear elsewhere in response to the user interaction. Thus, when interacting with a single page, the reader will see different elements appearing and disappearing, being moved around, changing colors, etc. without having to load a new page. In general the images “are generated, malleable, and operative time-based configurations that are authored to be responsive to interactive exploration” (Seaman 294).

In terms of the theory of cybertextuality Memmott’s work can be defined as an indeterminate cybertext. In indeterminate cybertext the generated scriptons are unpredictable, either because of user input, which is not the case of *Lexia*, or because of computational action, which is what Memmott utilizes. The scriptons are rendered indeterminate for the reader, since they are dynamic and unpredictable. While there is also jumping from one place in the text to another through links, a process the reader is already familiar with from hypertext, in cybertext computed permutation has the leading role for moving around in the space of this cybertext. Computation itself is at times determinate – underwritten by the designer – at others it is indeterminate and contains a random function (Aarseth, 1994 80). This cybertext allows for some links to be activated by the reader, who, however, remains completely in the dark as to what follows. There are no helpful tree-maps or hierarchical charts that would embed a link in the text space and give the reader a clue as in *Patchwork Girl*. The majority of links between lexias are triggered by a feature of the application. Where the links are timed and conditioned, the control of the reader/user over the cybertext is severely restricted, as the reading time for a given lexia is also conditioned.

For example, in the section of *Lexia* entitled “Exe.Termination,” Memmott utilizes the temporal link alongside the spatial one, i.e. he makes use of a certain characteristic of HTML, whereby text fragments or pages appear after a specified amount of time. The text pushes a new variant of the page every 6-8 seconds, and thus presents to the reader a different image containing the prefix ‘hyper-’, which blinks nervously and receives a different root morpheme to complete a potential word. At this point, the temporal distribution and sequencing of signs is entirely directed by the author/designer with the aid of the computational machine. In this manner Memmott makes the reader consider the “coevolution of agencies (both human and nonhuman, both clicking mouse and dynamic HTML” (Thacker, 2004 291).

The reader is put under severe stress and jarred into recognition as to the complexity of the act of reading. S/he is even made to admit the possibility of unreadability within the new digital environment; to realize the significance of the interplay between text and image, and most significantly the role of the machine which gazes back at him/her through the neurotic interface of this cybertext. As Hayles points out this feature of the cybertext renders the “I-terminal” – the fusion of subject and machine – not only a major theme within the work, but “a performance of techno-subjectivity jointly enacted by computer and user” (2004 298). The text is so engineered by the author as to invite the reader/user to assume different roles and play along. The reader is forced to participate literally in the workings of the textual machine. This may be entertaining, as much as it is disconcerting, and is no doubt a complex process. Setting the textual machine in motion leads the reader to conclude that cybertext can only be experienced, not read in a Gutenbergian manner, because of the simultaneity of scriptons. S/he also realizes that the senses are paramount to its exploration, and consequently his/her body is foregrounded.

By providing a remarkable interplay between randomness and control, *Lexia* reminds me of similar experimentation in print fiction, for example the cut-up technique used by William Burroughs in his novels, and the automatic writing practiced by the Beats. However, in cybertext this oscillation between unpredictability and mis/guided

alternatives offered to the reader, is a function of the computational machine as well, and not only a subjective choice of the author in the writing process.

Lexia as a hypermedia cybertext provides an advanced recombination of word as image and code. In its mutable context different media elements co-exist. The word (comprising the text) is one media element existing in the environment (visual space) alongside other media elements. This can be interpreted as “a technological heightening of the “illimitable” nature of Derrida’s combinatorics of ‘différance’” (Seaman 230). Word, image and code become networked, literally and metaphorically, so that different potentialities of meaning emerge and collide. At the same time it is important to recall Lev Manovich’s first “Principle of New Media” – numerical representation, which begins with the axiom: “All new media objects, whether they are created from scratch on computers or converted from analog media sources, are composed of digital code” (49). This coded layer of representation is sometimes invisible to the user; however, this is not the case with Memmott’s cybertexts. The complexity of digital representation and coding is pushed to the foreground, for it is an integral part of the interface.

The surface layer of cybertext is its execution, i.e. the way it is experienced in the browser window. Yet, in the digital environment, there is another layer comprising the source code, also underwritten by the author as designer. In addition there is a language that defines how this source code will be interpreted, i.e. the binary code of 0 and 1, executed by the computer. In considering the fusion and confusion of different media Memmott muses about their transformation and infiltration:

Hyper, of course, means “to excess”; in regards to text, I read it as something like: every medium leaves a mark, every cultural practice produces a form of writing. It is a question of application – in relation to the written word, hypermedia techniques allow for extended functionality that increase the narrative value of an image, lifting it from its previous illustrative state. The alphabetic can be made

animate, ideo- or diagrammatic as well. The interface itself can appear as ideogram with huge narrative potential.¹²

In considering the significance of media in the construction of this cybertext, or any textual body in cyberspace, I find useful the concept of remediation, introduced by J. Bolter and D. Grusin. By building on Marshall McLuhan's famous remark that the content of any medium is always another medium,¹³ they find, from the position of the current stage of media development, that there is "a more complex kind of borrowing in which one medium is itself incorporated or represented in another medium" (Bolter and Grusin 45). Remediation, according to them, is the representation of one medium in another and is: "a defining characteristic of the new digital media" (ibid.). K. Hayles suggests the term intermediation, which she invests with a similar meaning.¹⁴

In Memmott's cybertext the reader can find an example of the aggressive remediation of the older medium of writing. *Lexia* marks the presence of the word as a linguistic sign, while simultaneously transforming it into a kinetic visual image. Thus, from the logic of transparent immediacy as a feature of the translucent page of the printed book which should ensure the experience of immersion for the reader, there is an apparent move towards hypermediacy, marked by "the heterogeneity of windowed interface" and multiplicity of representation. The new digital medium "privileges fragmentation, indeterminacy, and heterogeneity and ... emphasizes process or performance rather than the finished art object."¹⁵ Notably, for the sake of the current analysis, the logic of hypermediacy in new digital media "multiplies the signs of mediation and in this way tries to reproduce the rich sensorium of human experience" (Bolter and Grusin 34).

One of the best examples of this rendition of the word as image

¹² "Active/onBlur: an interview with Talan Memmott" By Mark Amerika.

¹³ Thus speech is the content of writing, while writing is the content of print, print the content of the telegraph and so on. Marshall McLuhan *Understanding Media* 1964, 23-24.

¹⁴ She compares the two terms and considers "intermediation" to be "more faithful to the spirit of multiple causality in emphasizing interaction among media" (2005 33).

¹⁵ William J. Mitchell quoted in Bolter and Grusin, *Remediation* 30.

appears in the most unstable section of the cybertext – “Exe.termination”. On the screen alongside the image of a black-and-white photographic negative of an eye appears a part of a diagram, which brings to my mind either a mathematical graph or a cardiographic display, and an image that I alternatively interpret as a hand-written page with sketched notation on it or a shuttered window. Without any action on the part of the reader/user, almost immediately the interface starts transforming itself too quickly for the reader to be able to grasp its semiotic complexity. The program pushes to the surface a possible way to complete the prefix ‘hyper-’, where some of the available variants are: “-tactic, -mergency, -texture, -plex, -lexic, – fixation, – spectre, -lateral, -linear, -mediation” and many more (see Figure 14). And if this is not enough the interface gets more neurotic by scrambling bits of words and code.

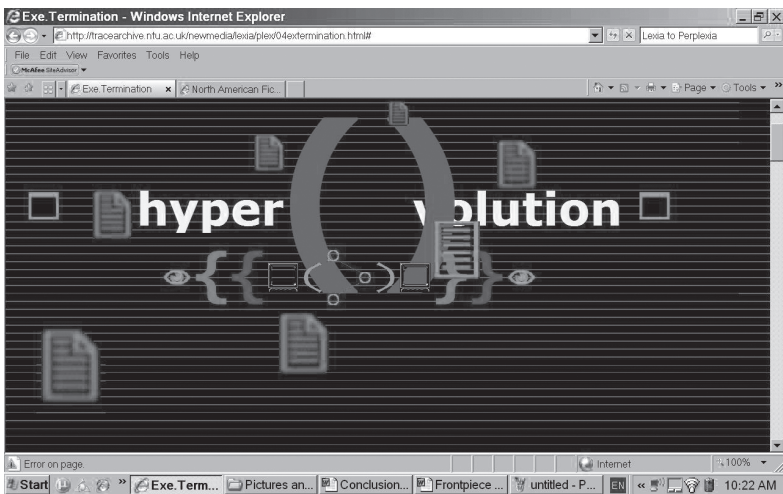


Figure 14. Talan Memmott *Lexia to Perplexia* “Exe.Termination”

A dictionary definition of the prefix ‘hyper-’ highlights the meaning of ‘having a certain quality in excess’ (for example, ‘hyperbole’, ‘hyperinflation’, ‘hypersensitive’). Apart from the meaning of excessiveness, ‘hyper-’ has the additional connotation

of 'pseudo'.¹⁶ In *Lexia* it is through the extreme intensification of a certain quality that the cybertext is transformed into its simulated version in such a way that 'excessive' and 'pseudo' merge. From a cultural perspective the connotations of 'hyper' are directly linked to Baudrillard's interpretation that in a "semiurgic society" the real disappears into a proliferation of images and signs, so that the simulation of the real becomes more authentic than reality itself:

Reality itself founders in hyperrealism, the meticulous reduplication of the real, preferably through another, reproductive medium, such as photography. From medium to medium, the real is volatilized, becoming an allegory of death. But it is also, in a sense, reinforced through its own destruction. It becomes "reality for its own sake" the fetishism of the lost object ... the hyperreal.

(1988 144-145)

In the creation of this perplexing, dispersing, unreadable and at times illegible cybertext, Memmott utilizes various strategies used in the textual body aimed at destabilizing it, which reflects the ontological undermining of the subject. The strategies add to the confusion experienced by the reader, but also significantly aid the writer in making the reader realize the complex interrelation between him/her and this text in cyberspace.

Lexia resembles *Patchwork Girl*, as Memmott also resorts extensively to the postmodern strategies of intertextuality and metafiction. For example, he incorporates the ancient myths of Echo and Narcissus by rewriting them anew in the digital environment.

¹⁶ For a revealing discussion of the meaning of 'hyper' in the context of the cultural transformation from modernism to postmodernism see Mikhail Epstein, "'Hyper' in 20th Century Culture: The Dialectics of Transition from Modernism to Postmodernism" *Postmodern Culture*. 6. 2 (January 1996).

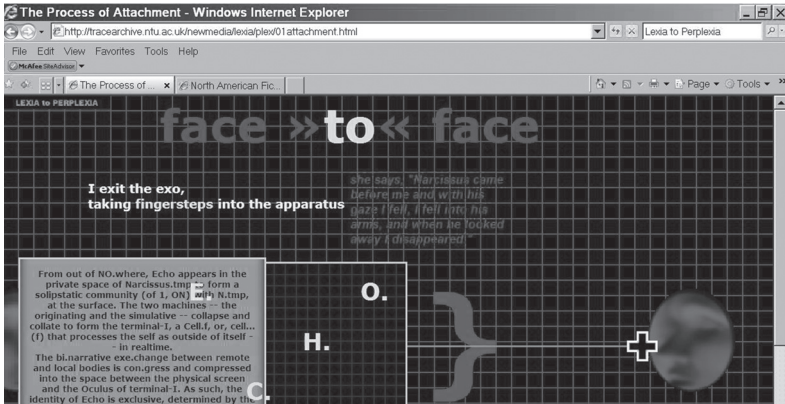


Figure 15. Talan Memmott *Lexia to Perplexia* “The Process of Attachment”

The name of the mythological nymph appears in the very first section of the cybertext – “The Process of Attachment”. The letters comprising the name float across the screen, at times even appearing as an abbreviation (E.C.H.O.), as if referring to an organization or company. Simultaneously with the introduction of Echo the image of the eye appears. Then the following text is revealed:

From out of NO.where, Echo appears in the private space of Narcissus.tmp to form a solipstatic community of (1, ON) with n.tmp at the surface. The two machines – the originating and the simulative – collapse and collate to form terminal-I, a cell.f, or, cell...(f) that processes the self as outside of itself – in realtime.

(*Lexia* “The Process of Attachment”)

The most obvious interpretation of the ancient myth in the context of cyberspace, and because of the heavy infiltration of computer code in the text, is that the human is a veritable Narcissus, while the computer fulfills the role of Echo. As Echo only repeats other people’s words, so the computer requires a human operator to

provide input, but also to “express itself”. In other words *the human as the originator*, though part of the “solipstatic original,” interacts with *the computer as a simulator*. The computer through its interface offers a reflecting surface where the human can look at him/herself as Other.

Marshall McLuhan comments on the tragedy of Narcissus caused by the misrecognition of his own image: “The Greek myth of Narcissus is directly concerned with a fact of human experience, as the word Narcissus indicates. It is from the Greek word *narcosis*, or numbness. The youth Narcissus mistook his own reflection in the water for another person. This extension of himself by mirror numbed his perceptions until he became the servomechanism of his own extended or repeated image. The nymph Echo tried to win his love with fragments of his own speech, but in vain. He was numb. He had adapted to his extension of himself and had become a closed system” (1994 41).

However, Memmott deconstructs the stereotypical reading of the Narcissus myth by the deliberate inclusion of the inorganic in the construction of subjectivity, not as a process of simple mirroring, but of mutual composition. As he explains in the companion text: “Though there is a degree of virtual materialism in this relationship between Narcisys and the returned [sub|ob]ject at the screen, the Narcisystem is not defined by the objecthood of the fetish. Rather, the screen signals the completion of a local circuit – {i} becomes currency and the local relationship between desire and its object is based more upon conductivity than collective or connective effects.”¹⁷ The digital machine forms an interactive loop with the user, whereby the composite, though temporal (signaled by “tmp”), techno-subjectivity is construed.

Lexia also extensively incorporates the theoretical and philosophical writings of seminal thinkers. The reader might be able to recognize if not direct quotes then at least concepts introduced by eminent philosophers such as Freud, Nietzsche, Deleuze and Guattari. In an e-mail quoted by Hayles, Memmott explained how he proceeded to extract texts that contained significant arguments

¹⁷ Narcisystems from “Deliberate Meshings”.

for later mediation, and how “[t]he context is built from the simple replacing of selves and others with cyborganized values. Then it is a matter of creating the connective, conducive space between” (Hayles 2004 296).

Quite illustrative examples of this strategy of intertextual, even parasitic *incorporation* of other textual bodies in this cybertextual one are the “Minifestos” included in the part “Metastrophe”. They are a subversive and playful reference to the many manifestos associated with the appearance of the computer, the Internet, cyberspace and the cyborg. Most notable among these are, undoubtedly, Barlow’s “Declaration of the Independence of Cyberspace” (1996), Haraway’s “Cyborg Manifesto” (1985), Stelarc’s “Towards the Post-Human” (1995) and others. There are also direct references to the “Body without Organs,” the concept developed by Deleuze and Guattari building on that of Antonin Artaud. I discuss the function and possible interpretations of these particular inclusions further in this chapter.

The second major strategy used by Memmott concerns the experimentation with the layout of the lexias and their extreme visualization, a strategy which I have already discussed in relation to *Patchwork Girl*. Cyberliterature as a whole realizes the postmodern vision of a text that is playful, opaque, decentred, polyvocal. Postmodern writers have used typography, page layout, and experimentation with narrative structure to liberate fiction from what Jameson has called “the prison-house of language”.¹⁸ The digital medium provides nowadays more than ever the tools to continue this line of experimentation laid down by the postmodern writers.

Memmott’s work is truly hypermedia for he makes the images and the dynamic interface, as well as the words, which are also rendered as images, participate in the process of signification. Among the most pervasive images are those of a floating eye, terminals, a window or page, of funnels, lines, graphs and mathematical symbols. Even though Memmott develops this strategy to an extreme, still I find it to be only a radical extension of the already familiar strategies of

¹⁸ I am referring here to Fredric Jameson, *The Prison-House of Language: A Critical Account of Structuralism and Russian Formalism*. Princeton Essays in European and Contemporary Literature (Princeton: Princeton UP) 1972.

spatialization and radical visualization of the text already discussed in the previous chapter in relation to hypertext.

The third major strategy has to do with the invention of a distinctive language – a system of signs. This includes a combination of English and computer code, mathematical algorithms, and neologisms. The neologisms are coinages where Memmott blends existing words that remind me of the modernist call “make it new!” It startles the reader to perceive afresh terms that have become transparent and meaningless through overuse and misuse. Such neologisms are, for example, “solipstatic” and “communification,” which I analyze further on.

Experimenting radically with the fusion of linguistic and computer signs has led to the creation of what Hayles has termed “a creole discourse” (2004 292). I find her comparison with creole in this context quite appropriate: “Code erupts through the surface of the screening text, infecting English with machine instructions and machine instructions with English, as if the distinction between natural language and computer commands has broken down and the two languages are mingling promiscuously inside the computer” (2004 292). The examples of this ‘creolization’ of English, which has become infected with computer code, in the cybertext are numerous: “id.entity,” “bi.narrative,” “cell.f.” The complexly coded system of signs is often incomprehensible to the reader/user; it is more than simply incoherent, for at times it is even completely meaningless. The typography is as if alive (see Figure 16). Consequently, the reader’s interaction with the interface does not produce meaningful results. Thus it succeeds in provoking different types of awareness in the reader, making him/her consider the autonomy of the cybertext. The computational processes and the evocative language involve multiple senses on the part of the reader/user. Therefore, s/he comes to realize that the apparent unreadability of the text has a definite purpose and that is to highlight the “illimitable nature of the combinatorics of code and flesh” (Seaman 294). Indeed this hybridization of human and computer language serves as a reflection of the hybridization of human and machine, which occurs in the actual cyborgization of the reader.

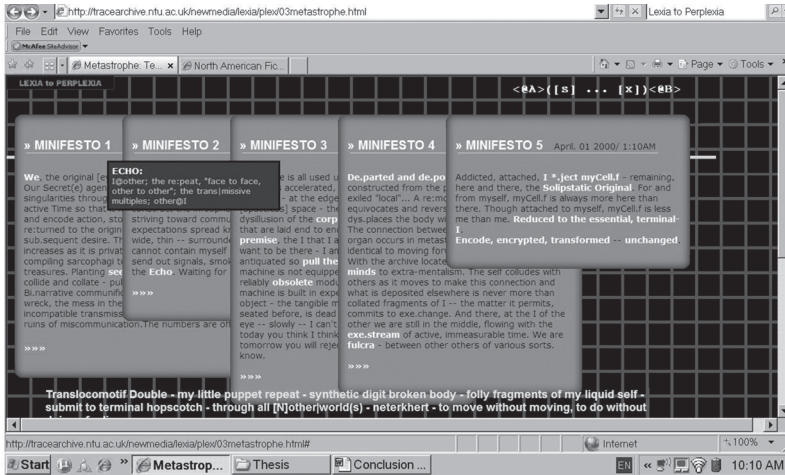


Figure 16. Talan Memmott, *Lexia to Perplexia* "Metastrophe"

One can hardly underestimate the role of code for computer operations. "In principle, all of the Internet-based works are based on the difference between code and surface. The source code represents a kind of notation or musical score that is interpreted by the computer when a page is called up by a specific browser such as Netscape, Internet Explorer or Opera. Like a virtual conductor and a symphony orchestra, the browser performs the score and displays it on the surface of the monitor. What we see is only the surface of a specific interpretation."¹⁹ By visualizing the underlying code that is responsible for the computer operations, Memmott prompts the reader to look for the cultural implications of code.

However, Memmott makes code not just visible, but pervasive, by bringing it out in the open, incorporating it in the textual body. Code emerges from the background to the foreground, from the deep structure of the cybertext to the surface layout.²⁰ As the author

¹⁹ Hans Dieter Huber *Only!4!!!!!!!!!!!!!!!!!!!!4-for YOUR Private Eyes. A structural analysis of http://www.jodi.org*; electronically published in February 2002. 23 June 2004 <http://www.hgb-leipzig.de/ARTNINE/huber/writings/jodie/indexe.html>

²⁰ See Katherine Hayles' analysis of print and digital textuality in terms of metaphors of surface and depth in "Print is Flat, Code is Deep: The Importance

states: “The encoding is multi-layered. There is the code-base of the application, which certainly participates in the narrative construction of the work through interactive functionality. The code-base also bubbles through to the surface, to the superficial narrative – the readable text – by what you have called ‘overprocessing’”.²¹ Memmott believes he is reiterating Deleuze and Guattari’s view that: “Each stratum, or articulation, consists of coded milieus and formed substances. *Forms and substances, codes and milieus* are not really distinct. They are the abstract components of every articulation” (1987 501). In order to get an idea of the complexity of the underlying code that produces this cybertext, out of curiosity the reader can have a look at the detailed code of only one page with its multiple visualizations – “Metastrophe,” including the 5 minifestos, which has been provided by Marjorie Coverley Luesebrink.²²

The function of code in the meaning of a programming language is raised to the status of a major theme of this piece of cyberliterature. By revealing how much text, and by this I mean any text, is embedded in code in the digital environment, Memmott foregrounds in a similar manner the fusion of human and machine, i.e. the cyborgization of the reader/user. This visualization of the code is a complication of the act of remediation, as “[t]he possibility of transcodification, of converting ‘older’ media forms into codes, presents writing not only with the taint of its own obsolescence but also with two routes away from itself – back to the image or forward to the code” (Raley 2006).

One example of code that migrates “to the surface as a static linguistic and aesthetic artifact rather than as a functional program” (Raley 2006) is the ‘signature’ “Sign.mud.Fraud,” which is to be found in the lexia “Cyb|Organization and its Dys|Contents”.²³ There

of Media-Specific Analysis,” *Poetics Today* (Fall 2001). For exploration of the architectural idea of “deep surface” in the context of new media see Lev Manovich, *The Language of New Media*, 31-34.

²¹ Talan Memmott, “Active/onBlur: An Interview with Talan Memmott.” By Mark Amerika

²² Marjorie Coverley Luesebrink “The Personalization of Complexity.” 13 Mar. 2009 <<http://tracearchive.ntu.ac.uk/frame5/coverley/lthree.htm>>

²³ Talan Memmott, “Active/on Blur.” Here the author explains that the pun with “...the {FACE}, FACE is the result of some thick premediation of an appropriated

is simultaneously a subversion of the name of Freud as a “fraud” and a reference to the process of the continuous deferral of signification by language and code of any kind for that matter, because of the use of the dots, which in computer languages are used to signal file extensions. “Such a move,” in Raley’s words, “situates natural and programming languages within the same semiotic frame” (Raley 2006). Finally, in considering the atomic unit from which this cybertext is assembled, I conclude that this is neither the letter, nor the word. Rather, it is code. Writing “becomes as much about the design of the interaction and textual recombination processes (which will determine the units that appear, and what relation they have to the reader’s body) as it is about the composition of the units fed into the system” (Wardrip-Fruin 207).

For what purposes does Memmott apply the already familiar strategies of visualization and spatialization and devise new ones, such as neologisms, and the mingling of computer code with language code? I consider them to be several. Through them Memmott foregrounds the fact that the act of reading cybertext involves not only the reader and the text, but the machine as well, for the text mutates as result of the computational activity performed and this affects dramatically the process of reading. Memmott points out that: “With *Lexia to Perplexia* there is a lot of negotiation around the media itself and an overt attempt to complicate signification, navigation, and orientation. Hypermedia becomes hyper(active) media”.²⁴ The computer as agent of the text and graphics, though at times illegible or irrational, complements the human agency of the reader/user and the author/designer. Hayles comments on this essential feature of the work: “Illegibility is not simply a lack of meaning then, but a signifier of distributed cognitive processes that construct reading as an active production of a cybernetic circuit and not merely an internal activity of the human mind” (51).

This intentional illegibility of the text does not only foreground the role of the computer as writing medium and its role in the

fragment from Freud’s “Civilization and its Discontents”.

²⁴ Talan Memmott “The nEARness/t of [IrOny] U’s” Interview with Talan Memmott. By M. D. Coverley *Iowa Web Review*. 6 June 2004 <<http://www.uiowa.edu/%7Eiareview/tirweb/feature/memmott/index.html>>

cybertext triad. It also serves to illustrate the posthuman conjunction of textual and human bodies. It is of paramount importance that these strategies, in my view, contribute to the reader's awareness that s/he uses his/her body as a medium to enter the cybertext as part of cyberspace.

The actual, physical cyborgization of the human is manifested in the plastic, metal and silicone implants which science has provided as a way to incorporate robotic technology inside the body. The "hacking away" of the human flesh (Kroker and Kroker, 1996) and its digitalization gives rise to cyborg consciousness, an inclusive metaphor, according to Gonzales, which stands for the hybridization of self in a culture dominated by digital technologies leading to substantial social, personal and other displacements (Gonzales 540). Memmott invites the reader to explore his/her cyborg consciousness and to consider whether his/her body has been devoured by virtuality. For Hayles, too, this process of cyborgization of the reader comprises the reading act: "Because electronic hypertexts are written and read in distributed cognitive environments, the *reader necessarily is constructed as a cyborg*, spliced into an integrated circuit with one or more intelligent machines. To be positioned as a cyborg is inevitably in some sense to become a cyborg, so electronic hypertexts, regardless of their content, tend toward cyborg subjectivity" (2004a, 17-19, emphasis added). Whether understood as the initiation of cyborg consciousness or subjectivity, the process of cyborgization of the reader is indisputably a legitimate one and can be construed from a Deleuzian perspective as a "becoming":

Becoming cyborg continually removes order in so far that it transgresses all limits or increasingly reconstitutes them. Order in its own dynamics is unrelentingly removed into this becoming. We need a different logic to that of frontiers to try to approach an everyday existence populated by becoming cyborg. This search itself is a political action ... It forces us, therefore, to confront the multiple and the varied, the fragmentary and the unfinished, the nomadic and the hybrid.

(Tirado 215)

Being a nervous text, *Lexia* is an apt response to the rise of neurasthenia, which can be interpreted as an oppositional subjective approach to technological supremacy in the current age. In the binary opposition between the human and technology, the human looks for practices of self-assertion in the face of arising techno-culture.²⁵ In his own original fashion, Memmott accomplishes precisely this by suggesting their mutual reconstitution in cyberspace and in this way trying to resolve the impasse of binary opposition between the organic and the inorganic.

2. The Human Body

With regards to rendering the human body as image and function, Memmott makes abundant use of the fragmentation, heightened visibility, and codification of the body. This cybertext reflects the extreme intensification of bodily dispersal, the lack of organization. The fragmentation of the body is realized in the intense codification of the body as information pattern, which can be digitally rendered as a database, as well as in the high visibility of the body's interior and exterior made possible by technological and biomedical practices. The visual and textual parsing of the body is a reflection of the dispersal of subjectivity.

Identity in the digital environment is portrayed as split, for the self desires to become detached from the body and to be transformed in cyberspace as a free-floating subject. Moreover, Memmott continuously emphasizes that embodiment is changeable, even though the body is constructed in this cybertext as abstract. He comments in a negative manner on the abstraction of the body, which stands in opposition to the multiple instantiations of embodiment that the individuated self may have. The self is plural, unstable, multiple, and his/her digital incarnation is one of the many manifestations of the individual, for "the screen-bound avatar [...] is already a trans|posed Cell.f of self" (*Lexia*). It provides the possibility of creating a virtual persona, a Web avatar not only in gaming VR, but in everyday

²⁵ For a relevant discussion of these issues see James Sey, "The Labouring Body and the Posthuman," *Cyberpsychology* 40.

communication, such as chat rooms, blogs and e-mails. This “screen persona” can come to overshadow the “real-life-persona”.²⁶

One of the most interesting strategies of language play used for the construction of the subject, alongside with punning and the use of homophones, are the neologisms that Memmott coins, as already mentioned. A revealing example is the title of one of the four main sections: “Metastrophe”. Memmott’s definition of this coinage is linked to the process of remixing done with music by DJs, as he explains: “Metastrophe – a doubling of a doubling that produces a single coupling in dual local spaces – produces a sort of noise in the text that could be mistaken for “scratching””.²⁷ My interpretation of the word is associated with the notion of change, transformation, metamorphosis. The second constituent of the word “-strophe” calls to mind poetry, and generally the rhythm of creativity. The idea of the metamorphosis, which creative work, body and identity are undergoing in the digital environment, is further strengthened by the very structure of this section: it consists of five ‘permanent’ “minifestos,” that appear successively and partially overlap each other, and several ‘temporary’ ones, which appear randomly at the bottom of the screen, substituting one another. The metamorphosis of self and body is expressed in the following: “We see(d) each other. Everywhere and all at once – never knowing at what point we’ve left the self for other strata – other re(li)gions – the body rendered faithless – departed as I progress – disappear transparent” (*Lexia*). In this Memmott echoes the dream of transcendence of the cyborg *synners* of Pat Cadigan, who have lost faith in the corpus.

In a central part of “Metastrophe” Memmott describes our future as a state of “communification” – another coinage, which is a blend between “community,” “communication,” and “codification.” As he ironically comments in *Lexia to Perplexia*: “it is in the hope of communification that we minimize the space of flesh”. This neologism also refers to the reading practices. There is hardly any

²⁶ Cf. *Life on the Screen: Identity in the Age of the Internet* (New York: Simon and Schuster, 1995), where Sherry Turkle draws telling conclusion about identity tourism in cyberspace, based on extensive research.

²⁷ Talan Memmott, “Active/onBlur: An Interview with Talan Memmott” By Mark Amerika.

doubt that today the reader is more a user of texts, applying openly consumeristic reading practices, for the digital environment is marked by the unrestricted practices of production and consumption.

A further complication in this attachment between the human and the digital machine involves the dispersal of the self into multiple “cell.f/ves”:

Addicted, attached I *.ject myCell.f – remaining here and there, the Solipstatic original. For and from myself. MyCell.f is always more here than there. Though attached to myself, myCell.f is less me than me. Reduced to the essential, terminal-I.
Encoded, encrypted, transformed – unchanged.

(Minifesto 5)

The underlined text marks the links in this passage. The collocation “I *.ject” consists of mixed code: linguistic and computational. The sign of the asterisk in programming language is used to signify a “wild card,” so the reader can read this neologism in many different ways: ‘object,’ ‘subject,’ ‘reject,’ ‘eject,’ etc. and thus complicate the meaning of the passage in a geometrical progression of possible interpretations. The eruption of computer code on the surface of the text represents a mixing of the processes of visualization and codification that mark Memmott’s approach to the image and function of the body.

An even more perplexing but intriguing collocation is “solipstatic original” consisting of a neologism conflating ‘solipsistic’ and ‘static’. Since ‘solipsistic’ refers to the view that the self is the only reality that can be known and verified, I interpret Memmott’s play with words as challenging this theory, accepting it as static. I infer from the author’s complex codification that he reiterates Jackson’s view that the self is multiple, unfixed, that it spills out into cyberspace, constructed as though virtually by the machine, which is construed materially by the human. Further support for this interpretation I find in the text linked to “solipstatic original,” which reads: “the BODY that remains. The body where [1] always is.” The original resides in the body of the individuated reader,

“who is always more here than there,” in other words embodied, and “reduced to the essential terminal I”.

The “cell,” apart from being a biological element, is also a small unit of computer memory, and the “f” could refer to a mathematical function, so one possible interpretation is that computational processes are operable by human action, and vice versa – that biological processes are a function of computational action. Its homophone “self” then is the creator, the originator, the human, while the “cell.f” is the artificial, constructed Other, the double.

The “terminal” that is part of the “I-terminal” refers to the fusion of human and computer into a posthuman entity. However, there is at least one occurrence when the words are reversed in “terminal-I”. This combination, together with the file extension “.tmp” used several times in the text, signifies the fact that in each interaction with the digital machine a new, albeit temporary, self is created. It signifies as well mortality, impermanence, fluctuation. Thus linguistic signs and computer code are parsed into constituent parts in ways that are made meaningful.

The central theme of the fusion between self and technology is expressed as the interrelation between the body of the operator and the remote body of the digital machine. The machine is the Other, which is required for the definition of the self. A useful reminder here is Haraway’s claim that the task of Others “is to mirror the self” (Haraway, 1991 177). The computer screen acts as a mirror for the user and Memmott emphasizes this fact with the animated pictures and the dynamic text. He foregrounds Haraway’s thought that “to be One is to be an illusion. To be Other is to be multiple, without clear boundary, frayed, insubstantial” (1991 177).

However, the posthuman relation between human and machine is not a simple one. It is one of “attachment”, of the common creation of a “bi-narrative,” of a doubling and self-reflectivity, of gazing at and being gazed at. Cyborgs are not enemies and aliens as Others. They are, to resort once again to Haraway’s words: “Our bodies, ourselves; bodies are maps of power and identity” (1991 180-181). A similar view is expressed by Hayles in the first epigraph to this Chapter. The main message of the disjunctive cybertext *Lexia* can be summed up in the following manner:

It is not clear who makes and who is made in the relation between human and machine. It is not clear what is mind and what body in machines that resolve into coding practices. Insofar as we know ourselves in both formal discourse ... and in daily practice ... we find ourselves to be cyborgs, hybrids, mosaics, chimeras. Biological organisms have become biotic systems, communications devices like others. There is no fundamental, ontological separation in our formal knowledge of machine and organism, of technical and organic.

(Memmott "Manifesto" 177)

Memmott comments in his highly original manner on this experience of the complex human hybridization with other communication devices, whereby machines could be animated, or organisms mechanized, i.e. the process of what he calls "cyborganization" – a blend between 'cyborg' and 'organization'. One such example is the following passage:

This extra-mentalism, or hyperlobal operation is the most obvious form of cyborganization, beyond the simple interfacing with a terminal. The extension of "I" to include an elsewhere, even if that elsewhere is the terminal right in front of you (I+device) is how a Cell.f is initially constructed, and from it Cell.f ID.entity.

In essence, ID.entity differs from identity by being transposed within a local/remote differential. Where Identity can be localized, reified at the body, ID.entity is only made evident through a remotional attachment to the Cell...f that is elsewhere, neither (t)here not (t)here.

(Memmott 2001)

Again the reader finds examples of many of the strategies already discussed. There is also an unambiguous suggestion of the cyborganization of the reader, from identity to "id.entity", from self to "cell.f," in the fusion of subject and device. There is a reconsideration of identity: from the essentialist view of it arising

from and residing with/in the local body, to its complex construal and dispersal through cyberspace. In this section the reader is also made to consider the interrelation between “body:self” and “body:remote”. The body of the self is actually the local body of the particular reader, who interacts through the medium of the text as image with the remote body of the digital network. The reader realizes that this cybertext can never be interpreted as a finished product, but always as a process; the text can also be seen not as an object, but as a potential, an event, where the participants are the human enactor and the computational machine. In a similar manner, the reader realizes that the body is not identical with itself, it is a becoming manifested through potential embodiments.

However, not only is the self reflected in the machine, but the machine also needs a self to reflect it, i.e. there is a doubling of reflection: “I possess a remote associate. A double. As well, the medium, the delivery machine requires its own Double, a receiving mechanism for its own transmission – which are in fact reflections and echoes of the operator of the machine and its trans|missive agents, the fragments of any/every originating self” (*Lexia* “Double-funnels”). The ghost within the machine is not an unspecified ethereal entity, but a doppelganger of the operator, who can equally well be the designer/author or user/reader.

But if this anthropomorphizing of the machine has been carried too far, Memmott astonishes us with the reminder that is quite commonplace: no matter how intelligent and even verbose the computer might seem (with its codes, algorithms), it is not alive, yet. He writes: “the tangible machine, the one you are seated before is dead already, or returns a dead eye ...” (“Minifesto 3”). Memmott asserts that the subject remains still emotionally attached to the flesh that contains him/her, even though one may feel alienated from one’s body when at the machine – an experience he denotes with the coinage “remotional”. The neologism could also refer to the remote, i.e. mediated process of communication between human and other humans, between human and machine.

Central to the discussion of distributed embodiment in this cybertext is not only an ironic deconstruction of the desire to transcend the body, but also the idea of the disorganization of the

body into a “Body without Organs”. Gilles Deleuze and Felix Guattari have suggested an interpretation of the biological body as a dynamic field and its remapping in the disorganized, deterritorialized “Body without Organs”. The “Body without Organs,” or BwO, is the key concept introduced in Plateau #6 (“November 28, 1947: How Do You Make Yourself a Body without Organs?”) of *A Thousand Plateaus* (1988) and also in *Anti-Oedipus* (1984), both by Deleuze and Guattari. BwO is a term which denotes an assemblage or body with no underlying organizational principles, and hence no organs within it. The term was first coined by Antonin Artaud in the 1940s,²⁸ and Deleuze and Guattari suggest that Artaud made himself a body without organs when he committed suicide on the 28th of November 1947 (1988 150). “Artaud wages a struggle against the organs, but at the same time what he is going after, what he has it in for, is the organism: *The body is the body. Alone it stands. And in no need of organs. Organism it never is. Organisms are the enemies of the body*” (1988 175-6). Memmott pays special homage to the origin of this concept with a lexia entered through the link ‘corpus Artaud’ to be found in “Minifesto 3”.

The BwO is not opposed to the organs; rather, “the BwO and its ‘true organs’, which must be composed and positioned, are opposed

²⁸ The term BwO originated in his radio play of 1947, *To Be Done with the Judgement of God*, where Antonin Artaud proposed the following:

-By placing him again, for the last time, on the autopsy table to remake his anatomy. I say, to remake his anatomy.

Man is sick because he is badly constructed.

We must make up our minds to strip him bare in order to scrape off that animalcule that itches him mortally,

god,

and with god

his organs.

For you can tie me up if you wish,

but there is nothing more useless than an organ.

When you will have made him a body without organs,
then you will have delivered him from all his automatic
reactions and restored him to his true freedom.

Then you will teach him again to dance wrong side out
as in the frenzy of dance halls

and this wrong side out will be his real place.

to the organism, the organic organization of the organs" (1987 158). It is an opposition against hierarchy, against dominance over the body by psychiatry, economy and institutionalized capitalism. The body for these critics is made of zones and matrices of intensities. It is "a plane of consistency" (156), "a field of immanence," a plateau of nomadic movement (1987 165).

The part of their theory that has been specifically ada(o)pted by theorists of cyberspace regards the concept of desire, which resurfaces in the cyber-romantic urge towards transcendence. For example, in his book *Terminal Identity* Scott Bukatman considers Deleuze and Guattari as "Cyberpunks, too, constructing fictions of terminal identity in the nearly familiar language of a techno-surrealism" (326). For him the BwO "is the state in which we aspire to dissolve the body and regain the world" (Bukatman 326). Desire is *intensified*, as it is "a process of production without reference to any exterior agency, whether it be a lack that hollows it [the body] out or a pleasure that fills it" (1987 154). Desire is a deterritorialization, for it takes you away from yourself. One loses oneself in desire. Pleasure is the end of desire because it is a reterritorialization. Memmott reflects this by writing that: "Desire is expressed through the construction of variable Narcisystems that privilege local space over remotional attachment".²⁹

The BwO is unformed, unorganized and non-stratified. It is round as the full egg before the organization of the organism. Hence the BwO, as Brian Massumi explains, is "the body outside any determinate state, poised for any action in its repertory; this is the body in terms of its potential, or virtuality" (1992 70). To this Deleuze and Guattari add that: "It is not at all a notion or a concept but a practice, a set of practices" (1987 149-150). "You never reach the Body without Organs, you can't reach it, you are forever attaining it, it is a limit" (150). Memmott foregrounds this extended, flattened body of coexisting potentialities, a body of becomings. Yet he emphasizes that he rewrites the BwO concept: "The "Body" that is constructed here [...] is not exactly like Deleuze and Guattari's – it is "a body with organs elsewhere", in reference to attachment

²⁹ Talan Memmott. "Narcisystem" from "Delimited Meshings. A White Paper."

to the Internet apparatus and the distribution of “being” across it – as data, as pixels, as energy...” (Memmott 2001). Memmott’s application of this concept refers again to the dispersal of the body and subjectivity and its transmigration over organic and inorganic space.

Accepting that the BwO conceptualizes the dispersal of the body into body parts, each of which “pushes to the surface, and becomes able to overcode the rest of the body,” Wegenstein proposes a playful inversion of the “Body without Organs” into “Organs instead of a Body” (OiB) (80). She argues that at the turn of the millennium there has been a synecdochic overuse of organs instead of the body. The OiB refer, according to her, to the “flattening” of the body, so that it becomes a screen, a surface of reflection, i.e. a medium in itself (80). In her analysis the organs that have become overcoded most often instead of the body are, firstly, the face, and secondly, the skin. She asserts, though, that any other organ can take on the role of pure mediation (118). By stressing on the utter dispersion and fragmentation of the posthuman, Wegenstein represents him/her as “a form of distributed embodiment, as “organ instead of a body”, that is not so much demarcated against the environment as extending seamlessly and robustly into the now ubiquitously digitized technosphere” (Hansen, 2006a xii).

Of all organs without a body in *Lexia*, Memmott focuses specifically on the face and the eyes by way of clarifying the complex process of embodiment in cyberspace. By rendering the face and the eyes highly visible, Memmott actually mirrors the overcoding of body parts in consumer and popular culture. The “process of attachment” between human and computer takes place at the location of the inter/face, as in: “the machine and operator are mutually capable of transliterating the cryptic processes of attachment into bi.narrative faciality – separate from the I, though rendered by/as it” (*Lexia*).

The inconstancy of location is transparent to the I-terminal as its focus is at the screen rather than the origin of the image. It is the illusory object at the screen that is of interest to the human enactor of the process – the *ideo.satisfactile*

nature of the FACE, an inverted face like the inside of a mask, from the inside out to the screen is this same
 <HEAD>[FACE]<BODY>,
 <BODY> FACE </BODY> rendered now as sup|posed
 other.

(*Lexia*)

In this paragraph, as in many others in the text, the body is parsed, and individuated through the face, while the face is individuated through the eye that signifies too the homophonic “I”. The “human enactor” is indeed a hybrid between human and machine, allegorized through the “I-terminal”.

The face is a point of intersection in several ways. The notation above in computer language (HTML) can be translated in ‘human’ language.³⁰ In the first case it indicates that the face is part of the head, but not part of the body, while in the second case that the face is the body, thus reflecting the overcoding of parts of the body in its increased fragmentation. Also, the face signifies the site where concealment and revelation converge; it serves as a mask and an entryway to the subject. There is a doubling of the face suggested in *Lexia*, as it is on one occasion the face of the enacting subject that watches and is also watched by from the face of the Other on the screen. There the reader finds his/her reflection as in a Lacanian mirror, being led into believing in an illusory wholeness and unity of self, where all the evidence presented by the often incoherent, diffuse text, is to the contrary. This reference to the face, together with the images of human bodies and eyes, is perceived by the human on the screen as a flat surface. There is a depth, however, to this ostensible transparency, from which these images emerge from digital code, as does any image for that matter in this technological age, including words.

Elsewhere in the text the reader comes across the following notation: “face>>to<<face”. Most significantly this notation refers to the process of communication, which in the information age is

³⁰ For a more detailed description of the technical side of computer code in this cybertext see Thomas Dreher, “Talan Memmott’s *Lexia to Perplexia*” 23 Jan. 2006 <<http://www.dichtung-digital.com/2004/4-Dreher-engl.htm>>

mediated via the computer. Unlike Memmott, Michael Heim in an attempt to counter the Gnostic tendencies of virtual disembodiment, discusses the face: “The living, nonrepresentable face is the primal source of responsibility, the direct, warm link between private bodies. Without meeting others physically, our ethics languishes ... The face is the primal interface, more basic than any machine mediation. The physical eyes are the windows that establish the neighborhood of trust” (Heim, 1991 75-76). For Memmott face-to-face interaction is complicated by the operating machine, so that it becomes rather a ‘face-to-interface’ one. Memmott asks the reader to consider the implications of this particular form of mediated communication: is it a new one, or only a new instance of remediation?

On another level of interpretation this focus on the face reminds me of Deleuze and Guattari, who criticize the overemphasizing of faciality in human communication, but they insist on “the coded nature of the face”. Any part of the body can become a face if it overcodes the rest of the body. Their explanation is that: “the face is produced only when the head ceases to be part of the body, when it ceases to be coded by the body, when it ceases to have a multi-dimensional, polyvocal corporeal code – when the body, head included, has been decoded and has to be overcoded by something we shall call Face” (1987 170). It is precisely this process that Memmott performs through his use of computer code in the notation: “<HEAD>[FACE]<BODY>, <BODY> FACE </BODY>”. This foregrounding of the head and face occurs in other places of the cybertext, too, as for example, in “Metastrophe: Temporary miniFestos” where the headless Acéphale appears at the bottom of a triangle, while Leonardo’s head is presented in a circle on the top, thereby intertextually connecting the two.³¹

The flesh refuses to be ousted, as Memmott demonstrates, while at the same time revealing the impossibility of fixed identity. The face, as one of the central images of Memmott’s narratives, resurfaces

³¹ I am referring here to the fact that the drawing by André Masson of the Acéphale (from Greek ‘headless’), which appeared on the cover page of the first issue of the public review of the same title, published by Georges Bataille in 1936, was a deconstructive pastiche of Leonardo’s masterpiece “The Vitruvian Man”.

in another web-based work of his – *Self Portrait(s) [as Other(s)]*. The human faces in this narrative are intentionally misplaced, disjointed, presented as variables, signifying the schizophrenic self. The narrative itself is split in two parts – a textual and a visual one – that appear simultaneously on the screen. The images are composed of the fragmented pieces of the self-portraits of some of the most renowned and cherished painters in the art history of the West. Each of these “portraits” is constructed as an assemblage of seven pieces, where the reader/contemplator of these “works of art” might be able to identify the mouth of Van Gogh alongside the eye of Monet. The visual images are coupled by the biographical sketches of twelve of these most prominent artists: David, Goya, Ingres, Delacroix, Manet, Degas, Cezanne, Monet, Renoir, Gauguin, Van Gogh, Matisse, which Memmott wrote using historical facts from their biographies. However, the textual and visual aspects of the narrative appear together in a random and discordant manner through a constant recombination of their constituents. The relevant context of the textual fragments and images is destroyed and this adds to the original poetics of subversion, which is characteristic of Memmott’s work, creating a continually shifting pastiche of face, form and text. The author’s own comments regarding his cybertext are that: “there is a simultaneous demystification and remystification. At the same time we are demystifying individual painters through a sort of facial excoriation, we are remystifying *the artist*, by relating one to another, to make one – *The Artist*”.³² In other words this approach provides a generalized image of the artists by conflating fact and fiction, visual and textual portraiture, with an ironic comment on the process of self/representation of artists in Western culture.

In *Lexia* one of the most exploited images is the eye, alongside the many puns with the homophones “I” and “eye”. One such example is the following passage from “The Process of Attachment”: “The eye that is the I looks out (across the ocean) through the many layers (of earth and sky), passing through gates and membranes, attaching, entering and exiting”. Here I find a suggestion of occult practices and the metaphysical passing (death, as well as rebirth)

³² Talan Memmott, “The nEARness/t of [IrOny] U’s”

typical of the techno-romantic visions of cyberspace. Further, the implication of the transcendental merging of the self with the basic natural forces of earth, water and sky, is compared to the passing through the layers of text and code, thus attaching the self to the machine, through the process of entering and exiting cyberspace, and the space of this cybertext in particular. Most significantly this passage suggests that it is through the process of perception as a sensory experience of the body that the construction of identity is realized, thus bringing to mind M. Merleau-Ponty's theory of the phenomenology of perception.

In addition, the eye looking back at the reader also refers to the psychological process of autoperception, i.e. the body image that one has of one's own physical appearance and parameters. Memmott actually prompts the reader to interrogate the body image of him/herself, especially by considering the role and place of technology. Lacan expands on this two-way interrelation: "I am not simply that punctiform being established at the geometric point where perspective is grasped. No doubt, in the depth of my eye, the picture is painted. The picture, certainly, is in my eye. But me, I am in the picture."³³ In a similar way Memmott focuses on the double reflectivity of body as perceiving subject and perceived object.

The disembodied image of a single eye that is a recurrent graphic in the cybertext can further give rise to numerous associations, depending on the reader who interprets it. The most obvious one is that this is the all-seeing eye of Providence, the watchful eye of God. Apart from Christianity it can refer to the Egyptian mythology and the winged Eye of Ra, the chief deity also known as the Eye of Horus. In a similar fashion it could refer to the eye of wisdom of Buddha. In addition, the image of the eye forms an essential part of the iconography of the Freemasons. It also features prominently in the state symbols of the USA, for example it appears on the Great Seal and on the one-dollar bill. The motivation for the inclusion of such a symbol as the Eye of Providence has to do with the fundamental role of Christianity and Freemasonry in the founding

³³ Jacques Lacan, "Les quatre concepts fondamentaux de la psychanalyse," 110-111 (translation by Jack W. Stone) *Joyce/Lacan/SintHome Page*. 23 May 2008 <<http://web.missouri.edu/~stonej/>>

of the American nation. Later, however, the eye also became a symbol of the DARPA, which played a decisive role in the origin and development of the Internet. As a governmental agency its role is associated with the function of control and surveillance, and at least in my reading, being familiar with this history, I interpret the disembodied eye(s) in Memmott's cyberspace as referring to such law enforcement practices, as well. Depending on the reader this image of the eye can acquire different significations.

Of paramount importance in the context of the present discussion is that the relation between body and world, including cyberspace, as a material space, is mediated by the sense of sight. Sight has a key function, as it connects object and subject, body and mind. Even VR is created on the borderline between perception and imagination. Perception as one of the key senses foregrounds the inevitability of embodiment. In this line of thought I should emphasize that Haraway, too, insists on the "embodied nature of all vision". To this she adds that perception is not only embodied, it is situated, since "optics is a politics of positioning," and "vision is always about power and positioning". This is because "the 'eye' made available in modern technological sciences shatters any idea of passive vision; these prosthetic devices show us that all eyes, including our own organic ones, are active perceptual systems, building in translations and specific ways of seeing, that is ways of life" (Haraway, 1991 190).

In general the proliferation of images in *Lexia* can be discussed in the context of Mark Hansen's theory that the digital image can no longer be regarded in terms of its represented content. For him: "the so-called digital image explodes the stability of the technical image in any of its concrete theorizations. Following its digitization, the image can no longer be understood as a fixed and objective viewpoint on "reality" [...] It is now defined precisely through its almost complete flexibility and addressability, its numerical basis, and its constitutive "virtuality" (2004 8). A new artifact is produced, which Hansen terms the "digital-facial-image" (2003 255). This complex image appears "since there is no exterior to the digital environment – because it is always an "inside" within a set frame – it is only through the body that the digital image can function and

fully adopt its purpose of affection” (Wegenstein, 2006 107). Hansen asserts that the digital image is not interpreted only on “the level of surface appearance,” but that it reveals “the entire process by which information is made perceivable through embodied experience (2004 10). As digital images float through cyberspace, the body has the function to stop them from floating, i.e. what Hansen terms “the framing function of the human body” (2004 10). He contests the continuous urge towards disembodiment, for he argues that the new media “explode the technical image,” and for this reason require more than ever actual bodies. Hansen privileges embodiment as the locus of perception, especially in the digital environment:

Correlated with the advent of digitization, then, the body undergoes a certain empowerment, since it deploys its own constitutive singularity (affection and memory) not to filter a universe of preconstituted images but actually to enframe something (digital information) that is originally formless. Moreover, this ‘originary’ act of enframing information must be seen as the source of all technical frames (even if these appear to be primary), to the extent that these are designed to make information perceivable by the body, that is to transform it into the form of an image.

(2004 10)

Wegenstein in her rewriting of Hansen claims that there is a shift “towards the corporealization of the image – in other words, far from witnessing a gradual disembodiment of information and images, the age of new media constitutes the current moment in a process of embodiment or corporealization” (Wegenstein 147). In my reading of Memmott’s cybertext, *Lexia* substantiates her claim that “body and medium reemerge as one *flesh*” (Wegenstein 148, emphasis in the original).

This reemergence of body and new medium becomes obvious in the extensive codification of substance, in the meaning implied by Deleuze and Guattari, as already quoted in this chapter. Memmott suggests that text and body are ultimately reducible to code. Hence *Lexia* is a body-centric and language-centric cybertext – a code-

centric exploration of the construction of self through technology. *Lexia* reveals the meaningful engaging of body and information. This reduction of the body to a string of code, which leads to the perception of the body as an information bank, is reflected in the scientific and technological processes and discourses whereby the “continuum of the body is reduced, encoded, codified – made elemental [...] Now we are small enough, we hope – it is the hope of communification that *we minimize the space of the flesh* – to continue on/in/out/off/and away”. (“Double-Funnels/(s)T(ex)T(s) & Intertimacy,” emphasis added).

This passage refers not only to the intense codification of the body as an information database, but also to its heightened visibility. One example is the dissecting gaze of medical technologies such as CT or MRI scanning, which create images of the body’s interior by scrutinizing it closely and presenting it in minute details. These various technologies actually represent the body on the inside, from an internal perspective that no human agent can have of his/her or any/body. The Visible Human Project (1993)³⁴ and the Human Genome Project,³⁵ commissioned by the US National Institute of Health, are the best examples of the culturally and scientifically dominant processes of the fragmentation, codification and high visibility of the body, its parts and interior. The Visible Human Project scanned the interior and exterior of the bodies of a ‘representative’ man – Joseph Paul Jernigan, a Texan on death row, and of a ‘representative’ woman – an unnamed housewife from Maryland.³⁶ The Human Genome Project, on the other hand, does not put the stress so much on the visibility of the body, as on its codification, i.e. on what presumably constitutes the human body per se. Both projects share a similar concept of the body as an information system, “an archive, an organic form of storage

³⁴ *The US National Library of Medicine*. 23 Sept. 2006 <http://www.nlm.nih.gov/research/visible/visible_human.html>

³⁵ *Human Genome Project Information*. 23 Sept. 2006 <<http://www.ornl.gov/hgmis/>>

³⁶ For a sociological and cultural analysis see Catherine Waldby “Iatrogenesis: The Visible Human Project and the Reproduction of Life,” *The Body: A Reader*, eds. Miriam Fraser and Monica Greco (New York: Routledge, 2005) 256-260.

and replication” (Wegenstein 81). The importance of these two astounding processes of the technological codification of the human body is far-reaching. Pepperell generalizes:

The obvious implication is that once the human has been reduced to a series of codes, such codes can be ‘re-mixed’ in a number of ways to produce mutant offspring with varying physical, cosmetic and cognitive characteristics. It is almost certain that genetic codes, being huge in data volume, will be stored and manipulated with computer systems, further implying that computers will be able to design new organisms from databases of genetic code.

(9)

Not only science and technology reduce the body to code as illustrated by the Human Genome and Visible Human Project. This happens continuously in the contemporary mediascape, in flesh-art and net-art. An interesting example is Camille Utterback’s art installation *Drawing from Life* (2001).³⁷ She aims at meaningfully engaging the body with information, by having the viewer/participant in the installation space look at a video projection of the image of his/her own body, rendered entirely through the letters “A”, “T”, “G” and “C” – the letters standing for the four proteins of DNA. The letters appear in the colors different for each protein used by scientists when decoding the genome. Utterback explains that “by abstracting live imagery of a viewer’s body into the letters that compose DNA, the installation raises questions about our embodiment and the code that is both part of, and helps produce our “selves” (2004 222).

By focusing so much on programming code in the space of *Lexia*, Memmot raises similar issues. The interface of *Lexia* is so built as to explore the interaction between physical bodies and various representational systems, including the various forms of computer code itself. However, the reduction of the body to code should not be interpreted as a simplification, but rather as one potential

³⁷ Camille Utterback, *Drawing from Life* (2001). 23 Sept. 2006 <<http://www.camilleutterback.com/drawingfromlife.html>>

view on the body made possible by technology – a manifestation of the merging of human and machine in a posthuman ontology. By rendering code simultaneously corporeal, material and visual, Memmott achieves a normalizing of the human-machine ensemble in a manner similar to the normalization of the teratological deviant body that dominated the discussion in Chapter Three.

Through his multilayered work, incorporating various signs: images of eyes, terminals, pages, graphs, algorithms and digital code; the mixing of human and computer language; incorporating intertextual references to the nymph Echo and the ravished by self-love Narcissus, Deleuze and Guattari's concept BwO and Wegenstein's OiB, Memmott reinstates the corporeal return. The overt, pervasive and at times invasive, presence of the image of an eye foregrounds the significance of perception from a phenomenological point of view. In opposition to the solipsistic theory, implied in one of the neologisms in "Minifesto 5," the eye suggests the fundamental role of perception as posited by Maurice Merleau-Ponty in *Phenomenology of Perception* (1962), the seminal analysis dedicated to the lived (perceiving) body. According to him, it is through perception that the phenomenological process of recognizing and sensing objects takes place. Perception, it is essential to mention, can only be embodied, so the production of knowledge is possible only within a corporeal reality.

In this regard Wegenstein finds that when discussing the lived-body experience "Merleau-Ponty's thought converges with Lacan's notion of the mirror-stage, in that for both thinkers the notion of an experienced embodiment goes along a double alienation, the recognition of one's self in a deceptive image that is framed by somebody else's gaze, a mirror, a screen" (Wegenstein 2006 31). This reflection of self is provided by the mirror of the screen. I find another interesting and surprising parallel which can be drawn between the views of Deleuze and Guattari, on the one hand, and Merleau-Ponty, on the other. The common points can be discovered in two major views held by these philosophers. Firstly, just as Deleuze and Guattari insist that the body is not a thing, but a becoming, so Merleau-Ponty claims that the body is not an atomistic and bounded entity, but is manifested through embodiment, hence

is not a state, but a fluid and variable process. Secondly, Merleau-Ponty continuously insists on the significance of the body's relations with the world, while Deleuze and Guattari perceive the body as a mobile assemblage of connections. The common views of these theoreticians, whose philosophical systems are so dissimilar, are clearly materialized in Memmott's work, as the analysis has already revealed.

The body in Memmott's cybertext, as I see it, is extolled as the subject of perception. Within the space of his work the materiality of the body is displayed in the reader's movements and actions. This relation between the body of the individual reader and cyberspace, where this cybertext can only exist, brings about a multitude of sensory experiences. Thus it is reaffirmed that experience and knowledge emerge out of the inextricable bond between body and spatiality, including cyberspace in all the connotations of perceived, imagined and lived-in space that I posited in Chapter 1. Since the fundamental experience of being-in-the-world is embodied, the body is not a dispensable, disposable object. Though it may sound paradoxical, denying the body is actually asserting its inevitability. The body is the major point of reference, the anchor, no matter whether the proposition regards transcendental disembodiment or immanent embodiment.

Hence even in the perception and experience of cyberspace, interpreted usually as a virtual, unreal, fantastic and mythical space, the body acts as a medium. A useful reminder here is Merleau-Ponty's conception of space as a universal power enabling things to be connected. The body then extends its actual, tangible boundaries by rendering external objects internal.

Indeed, it is through the relation of the body and its environment that the body is extended into the world and the world is present in the body. This interdependency results in the indelible character of embodiment, even when the body's environment is the virtual world of cyberspace. Memmott's text substantiates Mark Hansen's claim that embodied perception and enaction are required to access virtual reality. Drawing on Merleau-Ponty's axiom of the body as an "immediately given invariant," a "primary access to the world," "the vehicle of being in the world," Hansen claims that the "body

forms an absolute background, an absolute here, in relation to which all perceptual experience must be oriented” (2006 5). His basic arguments are as follows: first, he affirms the primacy of the body as ontological access to the world, and second, he asserts the role of tactility in conferring a sensory reality to external perceptual experience (5). He proposes the notion “body-in-code” not as a digital body, not represented as code in an informational database (the examples of the Visible Human and Human Genome Projects). For Hansen the “body-in-code” is a “body submitted to *and constituted by* an unavoidable and empowering technical deterritorialization – a body whose embodiment is realized, *and can only be realized* in conjunction with technics” (2006a 20, emphasis in the original).

Hansen re-writes Merleau-Ponty’s major claim of the indifference between body and world through the optics of the technological. What Hansen asserts is that technicity is not a newly added relation, but is actually a primordial one. He finds that the technical element has always inhabited and mediated our embodied coupling with the world and this is the main dictum of his hypothesis of the “originary technogenesis” of humans (2006a 26). In this hypothesis he posits that in the technogenesis of humans – the coevolution of the body and technology – digital technology remains only a stage. In a similar fashion, Boyan Manchev proposes his “anthropo-technological thesis” that the human, being biologically insufficient, *requires and has always required ‘techne’* to compensate for his/her deficiencies (2007 28, emphasis added). In other words, humans by creating prostheses can overcome their physical incapacity and realize their connection with the environment. In his view too, this process is not a recent one, but constitutes an originary state, for “*techne* originally supplements *physis*” (Manchev 2007 28).

Memmott’s cybertext supports Hansen’s and Manchev’s theses that technics is part of the originary state of embodiment. However, in my view, it is only at present that the actual incorporation of technology on a mass scale is becoming a reality of existence. In the current digital stage of technogenesis I find there to be an acceleration and intensification of technology as embodied. As Hansen argues, far from shifting humans towards a posthuman

state of disembodiment, digital technologies actually “lend support to the phenomenological account of embodiment” (2006a 26). I view Memmott’s cybertext as a ‘virtual’ cyber-proof of this state of affairs, for he reveals in the many layers of his work how the body is (still) the main resource for the mind and is where the self resides.

The several layers embedded in a single screen of *Lexia* require that the reader change his/her reading practices in order to decode the multiple meanings. This necessitates that s/he “expand the sensory experiences involved in reading, so that vision, subvocalization, and kinesthetic manipulation of fine cursor movements all become highly sensitized modalities” (Hayles, 2004 299). As a consequence, the bodily performance is made complex and the sensory experience is heightened in a way not comparable with print text. In other words *Lexia* contests the dominant drive towards transcendence of the body, by revealing how cyberspace actually expands “the space of the flesh”. The body is not a hulk, a container, but a medium. So embodiment is the compulsory, required prerequisite for interacting with the interface. Before it becomes a pure mental construct, cyberspace is produced by sensory experience (seeing, hearing, touching). Finally, being in cyberspace requires a synthesis of technology and corporeality, and Memmott’s work brilliantly reaffirms the symbiosis between the two.

Analyzing my own experience of interacting with this cybertext leads me to the conclusion that the reader’s body is the enacting body, in the meaning used in Chapter Two. What this cybertext ultimately achieves is a foregrounding of the perceptions of the reader, so that prominence is given to his/her phenomenological experience, reinstating embodiment, in its fusion with the inorganic, negating any idea of transcendence. Memmott succeeds in revealing the essentially ambivalent status of the body in being the locus of perception of the world, i.e. the body is subject, but is also an object perceived by the world. In this context Wegenstein notes that: “the body itself is the perceptive apparatus through which the world is being processed,” while also producing the image of itself ‘(autoperceptive)’” (29). In the act of reading this highly original, albeit restless and disconcerting cybertext, the reader comes to

realize that: “For us, in imagination and in other practice, machines can be prosthetic devices; intimate components, friendly selves” (Haraway, 1991 36).

As the analysis has revealed, Memmott, while writing allegorically and often ironically about the Cartesian split of body and mind, reasserts the body, perceived as the threatened constituent of the posthuman assemblage in the digital environment, which for him is the indelible constituent of our albeit disjointed subjectivity. In the technologized space of his hypermedia cybertext subjectivity is constructed and reconfigured. Memmott provides the reader with valuable visual representations of the sometimes lost in the machine, but always multiple and multiplying identities of the subject in the virtual world of cyberspace.

CONCLUSION

The idiosyncratic features of each text discussed in the three chapters indicate the main trends regarding the movement from the postmodern to the posthuman perspective in terms of textual and human bodies. A comparison of the works of Cadigan, Jackson and Memmott reveals how the textual body is being altered under the influence of the new medium: it demonstrates the convergence between experimentation with the body of traditional print texts and the new textual forms, while simultaneously revealing the radical transformations of the textual body in hypertext and cybertext brought about by the evolution of the computational machine, which becomes a decisive factor in the interrelation between human enactor(s) and signifiers.

The analysis of the respective texts has revealed that Pat Cadigan, Shelley Jackson and Talan Memmott share common views concerning the interaction between body and technology reflected in their works. Firstly, their treatment of the issue of embodiment in cyberspace remains *realistic*, as opposed to predominant romantic and techno-utopian visions. Even though they depict characters which may experience their (ad)ventures into cyberspace as sublime or transcendental, these three writers' position runs counter to the cyber-mythology that extols disembodiment. Secondly, by portraying the desire to transcend the body and to even completely discard it, these writers aim at and succeed in presenting disembodiment as an invalid option. In their writings they reassert the body. They take a *materialist* position, by insisting that the subject is grounded, literally and metaphorically, in the body. Thirdly, by accepting that there is an actual shift in human ontology involving the incorporation of the technological, these three writers share a *moderate, human-assertive, constructive posthuman* stance in the heated debate about embodiment.

All the writers under discussion hypothesize on the possible deconstruction of the organic and its fusion with the inorganic in a posthuman entity, which has already occurred as a scientific fact (for example, genetic hybridization, transsexual surgery, implants, cloning), as a cultural practice in the extension of the human body

and senses through the digital technology, and is now happening on a large scale in the everyday interface with cyberspace. However, the conceptualization of technology evolves: viewed in the first text under study as the threatening, but inescapable Other, it acquires with the final, third one, a central significance in the construction and demarcation of self.

In the discussion of posthumanism as a body of thought in the three texts I find a movement from the radical view that the posthuman is *an entity* towards which the human is evolving, and after which s/he is ardently aspiring, as presented in the writings of Hans Moravec, the artistic installations of the self-made cyborg Stelarc, and the novel *Synners*, towards posthumanism *as a perspective* on the human condition, as exemplified by the writings of Jackson, Memmott, Hayles, Ihde, Hansen and Wegenstein. This is a movement from the hard-core dedicated belief that technology will come to function *instead of the body* to the human-assertive view that technology has always been an extension of the body (technogenesis), that embodiment and technology have co-evolved, and so naturally technology is and will be incorporated *in the body*, in a manner that is non-oppositional, non-aggressive and consequently should be beneficial.

The life of the body which merges the biological with the technological is still defined through phenomenology, i.e. through perception, experience, 'intentionality'. In the process of the human interfacing with technology the emphasis is laid in the analyzed works on phenomenological empiricism tempered by the anthropocentric posthuman view. This 'soft' version of posthumanism revealed in the texts under discussion presupposes: (1) a peaceful coexistence between body and technology; (2) an understanding that the human incorporates technology, but that (3) this merging with technology does not lead to a transformation into an inhuman; (4) this process refers to the current reality not a hypothetical future.

In their writings Cadigan, Jackson and Memmott present a materialist, situated, embodied view on human subjectivity, which they see as fluid and unstable, discursively constructed, which escapes unity or wholeness. Subjectivity is profoundly influenced and contingent upon technology, which is constitutive for the

human becoming. However, the writers insist on the plasticity of the categories of being by divesting the posthuman in answer to Haraway's call of illusions, innocence, purity, detachment, and the will to achieve transcendence.

The most obvious convergence between the three texts I examine is not in the tools used to make meaning and structure of the corresponding texts, as these differ considerably and depend on the medium used to carry the textual body. The point of convergence is obviously in the common stance the three writers take as regards the place of the body. The urge to transcend the body, shared by the world views of Gnosticism and technosis, the fascination with the spiritual realm believed to be manifested in cyberspace, the disdain for embodiment, the technological obsession with immortality, they posit against the hypothesis of originary technogenesis – the common evolution of human and technology.

Drawing on my analysis and on Michel Feher's notion of the proximity between humanity and divinity, I suggest a categorization of the transformations of the body, reflecting different conceptions of the relation between technology and embodiment. In the "Introduction" to Part One of the three-volume *Fragments for a History of the Human Body* (1989), Feher proposes an organization on a vertical axis, which "measures the distance and proximity between divinity and the human body" (13). The human body at the top aspires to the divine. The hybrid between human and animal is positioned towards the bottom. At the lowest level of the axis are placed the hybrids "between the living organism and the mechanical contrivances purported to be inanimate which imitate or stimulate it" (13).

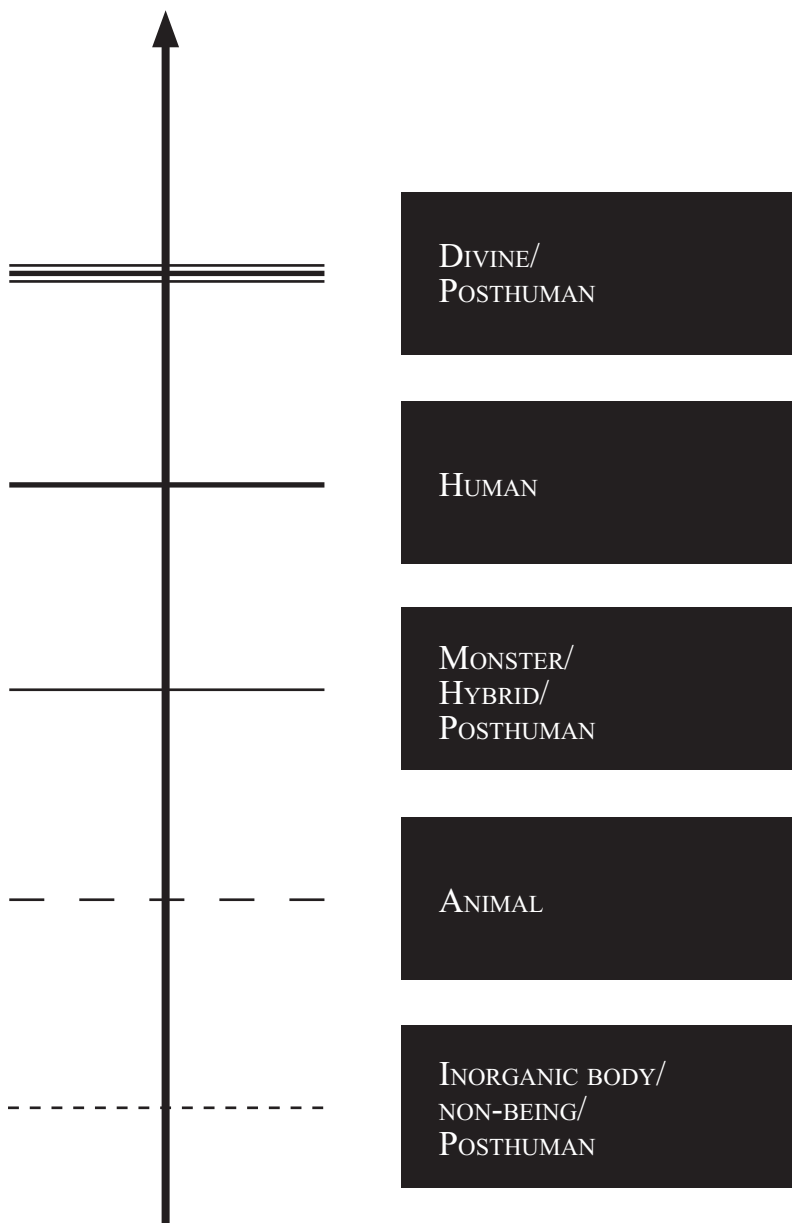


Figure 17. Envisaging the Posthuman as Entity on the Chain of Being

The arrangement of the posthuman which I suggest incorporates Feher's distinction but is built on analogy with Aristotle's hierarchical view of nature and the universe – the Great Chain of Being. I visualize the position of the posthuman in the chart presented above (Figure 17) as an ascending vector, where the inorganic (non-being) occupies the lowest point and the divine the highest. This chart, in my view, illustrates quite clearly the as yet undecided nature of the posthuman. The posthuman appears, as can be seen, not once, but three times on this vertical axis, depending on how this entity is envisioned in this 21st century Chain of Being.

When transcendence is professed to be a sublime experience, the posthuman occupies a place in the liminal space between humanity and divinity. For example, in *Synners* the posthumans who allegedly achieve this status are the characters of the disembodied Visual Mark and Artie, the benign AI, whom the human merges with to constitute Markt. Thus, the posthuman entity as a fusion between the biological and technological is for some closer to the divine, i.e. moves towards the ascendant end of the vector, but for others in its hybrid, liminal, composite state comes closer to the mutant and monster, a deviation from the normative body representing a miscegenation of species. For others still it signifies a complete exclusion of the organic and is rendered as a non-being. This potential ordering reflects how flexible and difficult to pinpoint the concept of the posthuman is, but more significantly it is a commentary on the volatile ontological position of the human in the technological age.

My analysis has revealed the intense traffic across the fuzzy boundaries and the permeable membranes of textual and human bodies in only a select and limited number of texts. Having analyzed the images and functions of several posthuman figures and liminal characters – the mechanical and organic cyborg, the AI, the disembodied mind, the monster, the “organs instead of a body,” I have found these to be quite revealing of how the transformations of the body and its functions subvert and enrich conventional understandings of the human, embodiment and technology.

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Александра Главанакова

МЕТАМОРФОЗИТЕ НА ПОСТЧОВЕШКОТО
Тяло и текст в кибрепространството

Българска
Първо издание

Формат 60x90/16
Печ. коли 16

Университетско издателство
„Св. Климент Охридски“
www.press-su.com